Department of Labor—Federal Security Agency Appropriations for 1952

HEARINGS

BEFORE THE

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

EIGHTY-SECOND CONGRESS

FIRST SESSION

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FEDERAL SECURITY AGENCY

PART 2

(Public Health Service)

Printed for the use of the Committee on Appropriations

UNITED STATES
GOVERNMENT PRINTING OFFICE
70807—pt. 3 WASHINGTON : 1951

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WEDNESDAY, FEBRUARY 21, 1951.

PUBLIC HEALTH SERVICE

WITNESSES

DR. LEONARD A. SCHEELE, SURGEON GENERAL
ROY L. HARLOW, CHIEF FINANCE OFFICER

Mr. FOGARTY. The committee has before it this afternoon the Public Health Service.

Dr. Schelle, do you have a statement for the committee?

GENERAL STATEMENT

Dr. SCHEELE. Yes, sir, Mr. Chairman. I have one. We sent mimeographed copies of this statement.

Mr. Chairman, Mr. Cannon, members of the committee, I know that you and your committee face an extremely difficult task which must be completed as quickly as possible. For this reason, I deeply appreciate your invitation to summarize the responsibilities and programs of the Public Health Service; and I will not belabor you with a long statement as I have in previous years.

I will take only a few minutes of your time, and I hope that my remarks will give you a useful background for considering our budget estimates for the fiscal year 1952. Our chief finance officer, and other members of my staff, will be responsible for detailed discussion of specific programs and items. I have here with me Mr. Harlow, who is our chief finance officer, Dr. C. L. Williams, who is the chief of our Bureau of State Services, Dr. Mountin, who is one of his associates, Dr. William Henry Sebrell, who is the Director of the National Institutes of Health, and Dr. Masur, the Chief of the Bureau of Medical Services, and a few of our other folks.

CONGRESSIONAL AUTHORIZATIONS

The Public Health Service had its beginning in 1798 as a program for hospital and medical care of American merchant seamen. In my office there is on display a facsimile of the original act, signed by President John Adams. During the past 80 years, Congress has imposed many additional duties and responsibilities on the Service.

Our present basic law is the Public Health Service Act of July 1, 1944 (Public Law 410, 78th Cong.). That act codified all previous laws, and authorized several new activities. As evidence of the rapidly expanding concept of public health, it is noteworthy that in the 6½ years since its passage, this law has been amended no less than 15 times, increasing the responsibilities of the Public Health Service. We also administer the Water Pollution Control Act (Public Law 845, 80th Cong.) which was passed in 1948.

The Congress thus has authorized the Public Health Service to conduct many programs and provide many services which contribute to the health of the American people. Some of these authorizations are broad in scope, others are specific. In the broad categories, we find such activities as cooperation with the States, research and investigations, and control of communicable diseases. The specific

categories include medical and hospital care of legal beneficiaries, foreign and interstate quarantine, medical examination of aliens, the regulation of biologic products, the control of venereal diseases and tuberculosis, the construction of hospitals and health centers, and control of water pollution. There are also specific programs of research in the following fields: microbiology—that is, bacteriology—cancer, heart diseases, dental diseases, mental illnesses, arthritis and metabolic diseases, neurological diseases and blindness. Some of these programs are direct operations of the Service; others are combinations of direct operations and grants. Still others are grant programs.

PUBLIC HEALTH SERVICES IN DEFENSE EFFORT

I now turn to the place of the Public Health Service in the world o today and its future in the world of tomorrow.

You gentlemen are aware of the impact of our national defense program on the Nation's human resources. The programs of the Public Health Service are concerned in every particular with conserving the Nation's manpower, because the basic objective is to reduce the volume of preventable deaths and disabling illness which are the greatest drains upon our capacity to produce. The physical and mental diseases and defects and the accidents which cause the major loss of productive manpower are also the principal causes of unfitness for military duty. This condition serves to emphasize what seems to me an obvious fact: Our country has not done enough in public health, and we cannot afford now to do less. The public health dollar is the dollar that does the most good for the greatest number.

We know that Russia is giving first priority to the development of her health resources, especially in terms of medical and related manpower, research, and improvement of the people's health. Fortunately, the United States is way ahead of Russia in these fields, as a result of the foresight of Congress. The people of the United States, through their representatives, have built in the Public Health Service strong programs for better health and for progress in medical research. In the days ahead the value of these programs will be increasingly appreciated.

Let me illustrate a few of the ways the Public Health Service is contributing to the national effort.

I have mentioned the broad program of cooperation with the States. We administer the appropriations for Federal grants to the States for health purposes. These grants represent the Nation's growing desire for better health and are the means by which the Nation as a whole invests a small proportion of its total resources in the public health programs of all the States. The national funds so invested are placed at the disposal of public health workers in the States and localities.

ASSISTANCE TO STATES

In addition, the Public Health Service assists the States and localities in the prevention and control of communicable diseases and advises them on other matters relating to the preservation and improvement of public health (sec. 311, PHS Act). An especially valuable method of advancing public health is the demonstration

of new or improved public health practices. These demonstrations are conducted by the Public Health Service in cooperation with the States, and through them better ways of doing a job are worked out. The results are made available to all health agencies. We also conduct special training programs in new techniques for State and local health workers.

NATIONAL HOSPITAL SURVEY AND CONSTRUCTION PROGRAM

Our national hospital survey and construction program provides aid to the States and communities in another vital health service. This program was established by Congress in 1946 under the Hill-Burton Act (amending the Public Health Service Act of 1944), in recognition of the vast accumulated need throughout the Nation for hospitals and health centers. Since 1948, nearly 1,500 projects have been approved for Federal construction grants and 382 of these have been completed. These hospitals and health centers are integral parts of the Nation's total health resources which are essential to conserving our manpower for farming, industry, and the Armed Forces. These facilities also will greatly strengthen our abilities to cope with atomic or biological warfare, since nearly all are located outside probable target areas.

MEDICAL RESEARCH

In the field of medical research as well as in public health, the national emergency intensifies the necessity for continuation and expansion of our activities. Research accomplishments of the Public Health Service pay big dividends in times like these. I shall mention a few examples.

Before World War II, research workers at the National Institutes of Health developed a vaccine to prevent typhus fever. They improved this vaccine markedly during the early days of the war. Our troops were thus protected against this disease, and are being protected today by the same vaccine. Recently the newspapers reported an epidemic of typhus in the North Korean and Chinese Communist armies. It is impossible to calculate what this contribution of the Public Health Service will mean in the Korean campaign.

I might digress a bit here and tell you of a little sidelight in this area which I witnessed during my time with the Army in the last war in Italy and in Northwest Europe. We found, for example, that the British troops, who had not had the benefit of our Cox-type vaccine developed by our Dr. Cox, were having typhus in their campaigns in Tunisia and their campaign in western Egypt. As we developed greater supply, we made it available to them, and the British Army stopped having a typhus problem.

Most of you, I am sure, heard about or read about the typhus epidemic in Naples, Italy. Again the vaccine developed in Public Health Service laboratories was a major factor, along with DDT, used as an insecticide for dusting people. Those two things brought that Naples epidemic under control.

Later I had to deal with a similar problem myself, in my capacity of Chief of Preventive Medicine on General Eisenhower's Supreme Headquarers G–5 staff, namely, planning for possible epidemics and a

possible pandemic of typhus which might hit in northwest Europe as our armies moved in. This is a story which has not been published, because we were all far too busy to put our hand to writing the technical side of this story, although the bits and pieces are in the archives. We were able, with the help of DDT and the use of the Cox vaccine, to meet every threat as it came along. We had large numbers of new cases of typhus appearing in Ukrainian and other DP's who had been brought in by the Germans. We had some 58,000 reported cases and ten thousands of deaths among these people and among Germans. Yet we had fewer cases of typhus among American troops who were in contact with these people than you can count on one hand; all, because this one vaccine was available. That is the vaccine that is protecting our boys in Korea at this time. It is difficult to put a dollar value on the sort of thing I described. DDT and the vaccine were the reasons we did not have a pandemic of typhus in the world, particularly in Europe and in Asia as an accompaniment of the last war.

Continuing now, I am only giving you some high lights on some of the research results. Until 1945, there was no preventive for mumps and before 1949 no specific treatment. Mumps is a disease of great military and industrial importance. Where men who are not immune are brought together in close quarters, mumps is likely to become epidemic. Research workers of the Public Health Service developed a preventive vaccine against mumps in 1945. It was proved effective in a real epidemic among farm laborers in 1946. In 1949 research workers of the Service demonstrated that aureomycin, given by mouth, is a cure for mumps. Can anyone doubt the value of this research?

Again, a research team of the Public Health Service discovered that a solution of table salt and baking soda in water, taken by mouth, will prevent shock and death in a high proportion of patients with severe burns and injuries. Use of this simple, readily available method will save thousands of lives that would otherwise be lost, in the event of enemy attack.

I am sure that none of us can doubt the value of this research. Those of you who had experience in World War I will remember that some of the so-called childhood communicable diseases were among the major problems that we had in the communicable disease field in our Army. Some of them were not quite so serious in the Second World War. When we bring boys in from the farm, boys who have been somewhat isolated, and we find adults who have not been exposed to these things. Mumps is a very serious disease in those adult males. It is almost as serious a disease in the adult female, although not quite as much. The reason for that is that complications often set in, including inflammation of the testes, which make it a very serious thing. It causes sterility, and that sort of thing.

Mr. SCHWABE. But ordinarily not death.

Dr. SCHEELE. That is right, sir. Although we do have some complications that are quite serious. We sometimes have some other accompanying infections, which we can control now quite well with the antibiotics.

These are but three examples in a host of instances which illustrate that our ordinary research efforts pay dividends all the time. The Nation cannot afford to slow down on medical research.

Turning now from research, I would like to mention briefly some equally vital programs—such as medical and hospital services, quarantine, biologics control, and national health statistics.

MARINE HOSPITALS

Since our largest groups of beneficiaries are seamen of the merchant marine and Coast Guard men, our marine hospitals are located chiefly along the seacoast, the Great Lakes and the Mississippi River. We also operate a tuberculosis hospital in New Mexico, the national hospital for patients with Hansen's disease at Carville, La., and two hospitals for the treatment and custody of narcotic addicts at Fort Worth, Tex., and Lexington, Ky.

National laws for the exclusion of epidemic diseases and international sanitary codes, to which this country is signatory, require the maintenance of quarantine services at seaports and airports of entry and at border stations.

The control of biologic products insures the potency and purity of vaccines, serums, and similar medical supplies. We license the manufacture and importation of such products.

NATIONAL OFFICE OF VITAL STATISTICS

Our National Office of Vital Statistics compiles, analyzes, and reports the Nation's figures on births, deaths, sickness, marriage, and other basic population data. It would be hard to overestimate the importance of this national fact-finding activity. For example, the Department of Defense and the Selective Service System depend on national vital statistics for estimates of the numbers of men who will be available in each age group, each year. School officials, other governmental agencies, and many industries likewise depend on these data for planning their program. In the event of enemy attack with biological weapons, whether by sabotage or military operations, our ability to combat an introduced disease will depend in large part on the readiness of the States and the National Office of Vital Statistics to act promptly in detecting and reporting cases and deaths.

In operating the various programs I have mentioned, the Public Health Service seeks to provide the Nation with the services of highly trained and skilled personnel. Our goal is to employ and develop the best qualified men and women in their respective fields, and to give them opportunities to grow in ability. There is good evidence that we are discharging the national trust in our competence; we have more requests than we can meet for consultation and advice to other Federal agencies, the States, and private organizations.

PARTICIPATION IN OTHER FEDERAL PROGRAMS

The Public Health Service, for example, participates in many Federal programs outside the Federal Security Agency. We staff the medical and dental program of the Coast Guard and care for its personnel in our hospitals and out-patient clinics. We operate the medical service in Federal prisons. The National Security Resources Board and the Federal Civil Defense Administration draw upon us for

technical service, including the assignment of specialists and the conduct of special studies.

At the present time, Public Health Service personnel are assisting in at least 40 other Federal activities, as full time or part time consultants or as members of special committees. For example, there are Public Health Service consultants with the Atomic Energy Commission and with the Defense Department's Committee on Special Weapons. Five Public Health Service officers, on leave without pay, are serving as State health officers in New York, Indiana, Florida, Ohio, and Pennsylvania.

BUDGET FOR 1952

Our budget for 1952 provides for 531 positions less than were available to us in 1951. I do not report this with any pride because I believe we are discharing people at a time when events point to the inevitable need for strengthening some of our activities.

In dollars, our budget is approximately $72,500,000 less than comparable appropriations for 1951. The 1952 budget includes an increase of nearly $16,500,000 to liquidate contractual obligations incurred in prior years, hence the reduction in authority to create obligations is about $89,000,000. This is a drop of almost 29 percent, of which 27 percent is represented by reserves established against the 1951 appropriations, and the remaining 2 percent by other reductions below the operating level of the current year. In terms of effective health services the reduction is even greater because of the increase in the cost of commodities and services.

At this critical time, health is our country's greatest asset. In sheer numbers, we can never hope to equal the manpower of the Communist nations. Manpower, in fact, is the most critical commodity in the national economy today. Much of the ill health and many of the deaths which reduce our manpower can be prevented. The programs of the Public Health Service have helped to build a strong and healthy nation for the purposes of peace or for defense in times of emergency. If we are to conserve our precious manpower, the Nation cannot afford now to reduce its public health services—Federal, State, or local.

The budget you have before you represents essential public-health activities for the protection of the civilian population—upon whom the Nation depends for both military and industrial manpower. You will find that in many cases we have shifted the emphasis from long-range objectives to emergency needs. But this is not a defense budget. It represents those indispensable, basic services upon which future emergency health services must be built. The Nation's health defense will be in chaos all along the line—if in the hour of crisis our basic health services have been weakened.

CONSULTANTS FOR THE ATOMIC ENERGY COMMISSION

Mr. FOGARTY. Thank, you, Doctor.

What are your people doing as consultants for the Atomic Energy Commission?

Dr. SCHEELE. Broadly, we are helping them in certain areas of research in the field of biology. One of our men, for example, is the

head of biological research at Oak Ridge. Others of our men assist them on the occasion of some of their special projects as they are conducted. In other instances, the competence of our Public Health Service staff in the field of stream-pollution control is utilized by them in the development of programs of stream study in connection with the discharge of radioactive wastes, and that sort of thing, and the effect of those on the plant life of the stream itself, which ordinarily helps to purify the water, and the effect upon other living things that have health significance along the way. That, broadly, is what we are doing. Some of the other things we are doing are of classified nature.

CONSULTANTS TO THE NATIONAL SECURITY RESOURCES BOARD

Mr. FOGARTY. What are you doing for the National Security Resources Board?

Dr. SCHEELE. The Chief of the Office of Health Resources is a Public Health officer on loan, and until recently, when there was a larger staff in that office, several others of our people were there. Most of those people have now moved to the Civil Defense Administration.

In addition, all the resources of the Public Health Service are available to the Rusk health committee, which is advisory to Mr. Symington and to the Board, and available to Dr. Aufranc, who is our medical officer over there, so that instead of having to have a tremendous staff themselves to do a lot of things, they can come to us for help.

We have recently undertaken a study of the unfilled positions and shortages in the field of public health and public-health practice in the States and communities. We have assisted them in other areas of manpower study.

We assisted the Office of Manpower of the National Security Resources Board by the loan of one of our people, who is competent in this field, and then by having study committees within the Public Health Service develop data for their use.

EXPLANATION OF REDUCTION IN 1952

Mr. FOGARTY. You say in dollars your budget is approximately $72,500,000 less than comparable appropriations for 1951. What do you mean by that?

Dr. SCHEELE. Mr. Harlow, may I ask you to cover that?

Mr. HARLOW. We get that, Mr. Chairman, by a development of the totals shown on page 50 of the committee print. I have a table here, which shows how we developed that figure.

You will observe that we start off with the totals shown on the page, and then we deduct the amount of liquidating cash which is included in those totals, to arrive at a net amount of cash that is available to us for obligation in the 2 years. We then add the contract authority, which is given us by Congress, during those years, to come up to a total figure available for obligations.

Contrast the total appropriated with the amount available, the total appropriated including contract authority for 1951, with the budget for 1952, and you will notice a reduction of eighty-eight-

million-eight-hundred-and-sixty-one-thousand-odd dollars. After taking the reserves required by section 1214 of the 1951 act and comparing that total with the amount of the estimate for 1952, there is a reduction of six-million-four-hundred-and-twenty-four-thousand-odd dollars.

The figure that does not appear on that table, that was mentioned by Dr. Scheele, the $72,000,000, is arrived at by adding the $282,000,000 which is shown in the 1951 appropriation column on page 50, adding to that the contract authority, which is not included in the total, and you come up with a total of $434,981,000; and subtract from that the $362,000,000 budget for 1951, and it leaves a difference of $72,000,000 in actual appropriations.

Mr. FOGARTY. Did you have any questions, Mr. Cannon?

Chairman CANNON. No questions.

BACTERIAL AND CHEMICAL WARFARE

Mr. FOGARTY. Dr. Hedrick?

Mr. HEDRICK. You spoke of bacterial and chemical warfare a little while ago. I wish you would discuss that; what bacteria as well as the chemicals be used to pollute our streams and destroy our vegetation.

Dr. SCHEELE. I am afraid I am not the most competent person to discuss many of the technical details. The range of known bacteria which can be used is quite extensive. It can be, as somebody has suggested, spreading typhoid fever by contaminating our public water supplies, either at the source, at the reservoir, or by contaminating a public water supply at some important point along the line. For example, to attack the Congress one might find a major water main coming into the Capitol or into one of the office bulidings and at that point put the material in. If the chlorine reserve in the water at that point were very low, and it would be under current practices in the United States, then everybody that got some of that water would get some typhoid bacilli and under certain circumstances, might develop typhoid fever. They might use any one of the dysentery group.

Now, I should say that we do not suspect that the influenza which is prevalent at the moment is enemy-spread. They might take such things as the toxins of bacteria and utilize them. They might take botulinus toxin, for example, which we have pretty well eliminated from the American scene by our more careful techniques of home canning and our more careful techniques of canning by our manufacturers of canned goods, and make this toxin in large quantity and find points at which they can introduce it into our food supply. That might be done in the kitchen at some point, where the impact would be major. They might attempt it at a point having to do with the military services that would be vital. They might attempt to do it here on the Hill. They might attempt to do it in the Government agencies. They might attempt to do it out in some defense plant. Those things could be very disastrous. They might attempt to put toxins into water supplies. The range is very extensive.

Mr. HEDRICK. How about chemicals, such as cyanide?

Dr. SCHEELE. That sort of thing could be used and could cause a fair number of deaths, although the kind of things that one would ordinarily expect an enemy to use would be something which would be innocuous in taste. Cyanide would be very apparent both to the

nose and especially the taste. That sort of thing is not beyond feasibility. It might be an especially good technique for eliminating a particular individual against whom one was directing an attack.

Then, in the plant field, I know practically nothing about the rusts and about the various things which would be useful agents there, but it is conceivable that they would attack wheat by attempting to spread parasitic diseases which might be difficult to control. It is conceivable that they would attack cattle.

Mr. HEDRICK. Anthrax?

Dr. SCHEELE. With anthrax or with other things to knock them out. One way to attack man is through his food supply. And in these days, and as we, I am sure, will continue in the future, when we are concerned about throwing considerable quantities of food into a pipeline to serve the military and overseas commitments at the same time, any reduction in our food supply could be very serious. That is the general type of thing which could be done.

There is a rather good decription of these problems, at least insofar as there is cleared information on them, in the Manual on Emergency Medical Services and Special Weapons Defense which has been prepared by the Federal Civil Defense Administration and recently issued by them. We will obtain copies of those and send them to you for the committee.

You may be interested in seeing this rather excellent document which was prepared, which covers not only biological warfare but covers chemical warfare—the sort of thing that we might expect, the nerve gases for example, and it covers a broad range of medical problems that could arise in the United States incident to actual enemy attack, either with bombs, atomic or others, or with other weapons, and would happen particularly in the so-called special-weapons areas.

I think one of the significant things in that book is that one cannot help but realize, as he goes through it, the dependence we have on a basic public-health structure in order for us to be mobilized against attack, to guard against such attack, which parallels the basic things we have been doing in the Public Health Service, the States, and the communities. And also, our voluntary agencies will play major roles. Their existence will be a godsend at that moment of need, and they all need to be welded into a sort of a common working program to be ready in event of these emergencies, which we hope won't occur, of course.

PROTECTION AGAINST ATTACK

Mr. HEDRICK. It might be interesting to the committee to know just what simple things they might do to protect themselves in case of attack.

Dr. SCHEELE. Well, in the matter of biological warfare, as far as the individual is concerned, there probably is not too much to do at the moment. We don't advocate immunization against cholera, against plague, against some of these other things by mass-immunization procedures at this stage. Later it is conceivable that that might be done. We have to depend on our State and local public-health services being strong, on the intelligence services being strong, getting good information before attack, and on watching what is going on.

In the case of atomic attack, if we have warning, and that warning might be an actual announcement that the enemy is at a certain point and is coming in to drop a bomb, at that point it would behoove us to protect ourselves from flying glass and debris. One of the things that happens if an atomic bomb goes off would be the same things that would happen when high explosives go off—blast, concussion, and heat.

One certainly would not want to be leaning against the radiator in front of that window. One might better pick a place against the wall over here. One might perhaps better get down on the floor in that corner or under a desk, with something to protect one's self against the chandelier, the window, the furniture, and other things when they start flying in all directions. This is assuming that the blast is far enough away that it doesn't push in the walls of the building or push the roof down too. If we are off at some distance, then the major thing that would be a nearly immediate problem would be blast. In time a pressure wave will come out. We might have 1 second or 2 seconds or 5 seconds or 20 seconds before that wave arrives where we are. If the bomb hit Washington, and we were in northwest or northeast Washington 10 or 15 miles out, and it was not different from the ones we know the end result of from our bombings of Japan, we might have plenty of time to do this sort of preparation which I mentioned. One does not want to wander around outside. It can be that there would be a water burst. In other words, it might, if it were to go off in the Potomac or the Anacostia Rivers, disperse a cloud of radioactive water into the air. There might be a falling out from that cloud. So, again, one would want to stay under cover. One wouldn't want to attempt to face in the direction in which the thing was happening, if that could be estimated. The best thing to do would be to look away from the place where it might be, because there again there might be some temporary blindness from the flash.

Beyond that, again, too, the problems for the individual who is outside the immediate area or who is at the fringe, where maybe there is some injury but not too much, one should remember not to panic, not to get into automobiles and drive in to find out where members of the family are, and that sort of thing. All such movements would congest roads which would be needed for fire and other emergency equipment. It behooves folks to learn a little more about emergency first aid, so that one can help whoever he is with, if he is in a little better shape than the other fellow. Those who are in a position to serve on voluntary and other civil-defense services, as fire wardens, or emergency policemen, first-aid workers, or ambulance drivers, should do what they can in those organizations. So that again we develop a civil-defense structure.

What we want is a structure ready to go into operation, a disciplined group of people who know their business, who know what goes where and who does what, as their part of the job.

BACKGROUND OF DR. SCHEELE

Mr. FOGARTY. Mr. Schwabe?

Mr. SCHWABE. Dr. Scheele, you have been in the position you now occupy for about 2½ years?

Dr. SCHEELE. Yes, sir; that is right.

Mr. SCHWABE. Having succeeded Dr. Parran?

Dr. SCHEELE. That is right.

Mr. SCHWABE. He occupied the position as Surgeon General of the Public Health Service for about how many years?

Dr. SCHEELE. For 12 years, sir; three terms.

Mr. SCHWABE. I think it might be well, Mr. Chairman, for the information of the membership of the House as well as perhaps some of us members of this committee, if the doctor would briefly sketch his background and qualifications.

Dr. SCHEELE. Yes, sir. I would be very happy to.

I was born in 1907 in Fort Wayne, Ind.; attended high school there, and then went to the University of Michigan in Ann Arbor. I spent the equivalent of 4 years there and obtained my A. B. degree. I obtained my medical training at Wayne University in Detroit, what was then called the Detroit College of Medicine and Surgery.

In 1933 I entered the Public Health Service as a career and interned in the marine hospital of the Public Health Service in Chicago. Then I had a series of assignments of the type which come to Public Health Service career officers.

My first assignment was on the west coast, where I worked in the field of foreign quarantine and in the care of patients, giving medical care in the facilities we had there. I did that for approximately a year. Then I was moved to the same kind of work in Honolulu, in our office there. I spent a year in Honolulu, and then returned to the United States, to the mainland, and was assigned to an orientation course in the Public Health Service in Washington, D. C.

In those days, some 10 or 12 people each year were selected in the Public Health Service to receive 3 or 4 months of special training in the programs of the Service; and during that period we heard each of the men who had individual programs tell us what they were doing.

We went out to the National Institutes of Health. We were put to work in the laboratory. We learned how to do water analysis with our own hands, how they determine hardness, and that sort of thing.

Then, following that assignment, I spent the equivalent of a year, actually about 10 minths, on loan to the State Health Department of Maryland, which in turn assigned me to a rural county,-Queen Anne's County, Md., on the eastern shore, to serve as county health officer. I had experience there, training in the field, so to speak, in rural public-health problems.

At about that time, the Public Health Service's interest in chronic diseases was growing, and I was selected to receive special training in that field, particularly in cancer. I went to New York City and, through the good offices of Dr. James Ewing, who was probably the outstanding figure in cancer in the world and is now dead, who was the director of the Memorial Hospital for the Treatment of Cancer and Allied Diseases, I had a year and a half fellowship in the clinical study of cancer. Simultaneously, I worked on research in a number of related fields. I was studying the end results of cancer treatment and that sort of thing.. I also did extra work in epidemiology, biostatistics and public-health administration, attending the Delamar School of Health, which is the school of public health at Columbia University, part time.

Following that, I came to Washington and was assigned to the Division of Public Health Methods. I was transferred to the National Institute of Health in 1937, and to the Cancer Institute, following the passage of the Cancer Institute Act in 1937. I worked there during that period on research in cancer, working with the States and with the States' relations activities of the Public Health Service, in attempting to find ways to detect cancer earlier in people and in attempting to bring better understanding of the cancer problem to the individual, so that instead of being frightened he would go and see his doctor and be examined occasionally. We worked on the cancer-detection concept.

I was working, too, with the American Cancer Society very intimately in those days, even as we still do in the Public Health Service. I worked at that until the Monday, the day, after Pearl Harbor, when I was called and told that now that we were at war, my services were needed in civilian defense. And so I was assigned by the Surgeon General of the Public Health Service, Dr. Parran, to the United States Office of Civilian Defense.

I worked there for approximately a year, in charge of field casualty services, and then, on request of the Secretary of the Army, or the Secretary of War, which was the title in those days, I was detailed to the United States Army, to its Medical Department, for service with them. Initially I was selected along with an attorney and a public-safety officer, an economics and supply officer, a finance officer, a man by the name of Joseph Knight in finance field, who is the vice president of one of the Chicago banks, and others. We were flown to Algiers to join the Allied Force Headquarters staff of General Eisenhower to do planning up in the Atlas Mountains at a place called Chrea, for the invasion of Sicily and the ultimate move over to the mainland of Italy. I worked initially there on the Army Group staff of General Sir Harold Alexander; went over into Sicily with them.

The two armies in front of us were General Patton's Army and General Montgomery's Army. I shifted over when the Italian surrender came and when Italy was declared a cobelligerent to a group we had coming up behind us, a group of people called the Allied Control Commission, which was to deal with a surrendered Italian Government. I was shifted, because of my experience in the combat phase of military-government operations in Italy, to the control group. I served as their liaison, between the group who were dealing with the new Italian Government and the forward elements of the Army fighting up through the mainland of Italy.

In 1944, January 13, a date I remember very distinctly, I was selected by members of General Eisenhower's G–5 staff to accompany them to England to be on the new SHAEF, Supreme Headquarters Allied Expeditionary Force, planning staff in London. I continued on that staff as it became an operating staff in the field, moving successively over on to the Continent to France and on up into Germany. Then, when the war came to a conclusion in the Pacific, by that time our headquarters was in Frankfurt, Germany, and the Allied Control Council had been created as a result of some of the conferences between the national leaders.

That Council then went into action, and there came the day when the Russians moved out of a quadrant of Berlin which became the American Zone. I moved with the first American forces to Berlin,

where I stood by for the Potsdam Conference, to be a health technician to describe health problems and conditions in Germany should that be an item which they required some further enlightenment on. I stayed on under General Clay's direction. Gen. Lucius Clay was my immediate superior on that particular operation in Berlin. At General Clay's direction I aided in opening the first public-health discussion with the French and the British and the Russians to try to arrive at the coordination that the Allied Control group were supposed to achieve.

After some 2 months of that, the Public Health Service felt that I had done my bit. I was an officer of the Public Health Service all this time on loan to the Army, and they felt that the Army should carry on for itself at that point, and so arrangements were made to send me back to the United States.

I returned to the United States and was reassigned to the National Cancer Institute. A short time later I was assigned as Director of the Cancer Institute. Still later I was appointed an Assistant Surgeon General, and then, some 2½ years ago, as you said, April 6, 1948, I became Surgeon General.

For the benefit of those who don't know the background of the appointment of a Surgeon General in the Public Health Service, under the law the Surgeon General must be appointed from the career commissioned personnel of the Public Health Service. He is appointed by the President for a term of 4 years, subject to confirmation by the Senate. That is my history.

Mr. SCHWABE. Doctor, that is a very excellent explanation of your background. I really did not intend to call for so much in detail, but I think it is well for us to have that in the record.

Your background is such that I take it you have not been what we would term "an advocate of socialized medicine"?

Dr. SCHEELE. No, sir; I haven't advocated socialized medicine.

Mr. SCHWABE. On the contrary, you want to see that maintained as an independent profession; is that right?

Dr. SCHEELE. Yes, sir; although there may be a little question of definitions involved.

Mr. SCHWABE. I appreciate that. But the terminology is sufficiently well understood by all of us that general terms may be used thus far with common understanding, I am sure.

Dr. SCHELE. Yes, sir.

COOPERATION WITH THE STATES

Mr. SCHWABE. Is it your attitude to exert any considerable degree of control over State and local health organizations, of the medical profession primarily, from your office, merely by virtue of the fact that you and your office and staff dispense large sums of money in grants in aid, and so forth?

Dr. SCHEELE. No, sir. It has become almost a tradition in the Public Health Service that we not operate that way, in spite of the fact that within some of the authority that we have the Surgeon General has certain powers to make regulations or to otherwise administer programs.

Mr. SCHWABE. And is directed by law in some instances to do so, as a matter of fact; is that not correct?

Dr. SCHEELE. Yes, sir; that is correct. But we have down through the years—and I can't take credit for this; this was done long before I was Surgeon General—we have in our relationships with the States dealt with them and attempted to do everything in cooperation with them rather than by directing them. We have, created by law, the Association of State and Territorial Health Officers, who serve as an advisory body. They come and meet with us in Washington once a year.

In addition, their executive committee, which acts on their behalf in the interval, comes here occasionally. They are due in now in just a few days. And so we are constantly clearing with them the programs that we have and the things that we are doing we discuss with them; changes in working relationships, when we sometimes have to change a formula or something of that sort. We clear those things with them.

In the case of our operations in research, where we are giving research grants-in-aid, there again, with reference to the councils that the law has provided, the advisory councils, the final determinations are vested in the Surgeon General, and yet those councils by law can prevent us from giving a particular grant if they should vote against it. On the other hand, if they vote for it, the Surgeon General can still say that he would not give it.

Obviously, I don't operate that way, because I don't have the technical competence to judge these things. In other words, if these fine committees of experts who come and meet on our research grants-in-aid programs have a best judgment which is a "Yes" or "No" or a modification of a project that someone is asking for help on, there is no way for us to have any superior judgment, I mean on our own parts.

There has been only one instance when a council decision was reversed, since we have had those programs, beginning in 1937 in the field of cancer. That was several years ago, when one of the universities asked for help in the construction of cyclotron at a cost of some two hundred and fifty or two hundred and sixty thousand dollars. It seemed as though it would be a good idea to have that cyclotron built and have the research be done which only it could do. However, after the council recommended it, Dr. Parran found that the Atomic Energy Commission had just had some funds earmarked in the field of cancer. We conferred immediately then with the medical chief of the Atomic Energy Commission, Dr. Shields Warren, and found from him that in his plans for expenditure of that money were plans for the construction of a number of cyclotrons, one in the Argonne Laboratory near Chicago, and one at Brookhaven on Long Island, one at Oak Ridge, one in California at Berkeley. And so it didn't seem appropriate, since our general advice was that there shouldn't be more than, say, up to five or six of those, to do the research problems, that we should invest this sizable sum of money in that particular project. So, with everyone agreeing, we declared this with the council, and the decision was reversed. But that was the only instance of a reversal.

Mr. SCHWABE. There are many instances, are there not, where even though your office has been directed by congressional enactments to promulgate rules and regulations to implement the law and put it into application and operation, the regulations may have been found

to be somewhat arbitrary or such that a change was suggested, due to local conditions?

Has it been your policy to yield to the propriety of such changes as readily as you could appreciate the existence of such a situation?

Dr. SCHEELE. We would be if that were to happen. But I don't believe that there have been many instances of that kind.

Mr. SCHWABE. I have one in mind particularly in connection with hospital construction. It happens that the first hospital completed under this new program was completed in my district. It could not have been completed if the regulations had been lived up to as originally promulgated by your predecessor. But readily they were changed to adapt the program to the local situation.

Dr. SCHEELE. Yes, sir. We don't want to have arbitrary regulations which would hamstring such projects.

Mr. SCHWABE. And to that extent, I hope I am right in saying that I understand that you are willing to adapt yourself to fit local conditions without being arbitrary from the top on down.

Dr. SCHEELE. Yes, sir. I would like very much to have it show in the record that that is my policy.

SPECIALIZED WORK OF DR. SCHEELE

Mr. SCHWABE. With that in mind, you have specialized more particularly in the field of cancer, as far as your personal work is concerned, I take it?

Dr. SCHEELE. My work in clinical medicine, yes, sir; although most of my career has been in administrative medicine.

Mr. SCHWABE. That is true, but I meant as far as clinical medicine is concerned.

This new program that is to be inaugurated down here from the Bethesda Medical Center—you call it the Medical Center, do you not?

NATIONAL INSTITUTES OF HEALTH

Dr. SCHEELE. It is the National Institutes of Health.

Mr. SCHWABE. Will you give us just a little word picture of the purpose of that institution and the manner in which you contemplate operating it?

Dr. SCHEELE. Yes, sir; I would be very happy to.

The National Institutes of Health was the original research arm of the Public Health Service, and it is still our primary research arm in the field of the biological sciences, and particularly in the field of fundamental research as contrasted with applied research.

The earliest work of the National Institutes of Health was in the field of bacteriology. That was also in the so-called era of bacteriology when there was a national interest, a Federal interest, in diseases which one man could spread to another. And thoughts of cooperation, thoughts of international cooperation on quarantine, thoughts of cooperation between the Federal Government and the States, watching what happened across a State line, were the general thoughts of the day. And so that program began largely in that particular way.

There were some who thought that there might be some germ theory of cancer. There was interest in nutrition and in a few other areas.

Then, in 1937, the Congress unanimously passed the National Cancer Institute Act, believing, apparently, that the cancer problem, which was then killing 125,000 people or 130,000 people a year, was of sufficient importance to warrant a directed large scale national attack on it through Federal action.

The Congress also in the same act extended the authority of the Public Health Service, the range of authority of the Public Health Service, to go beyond doing research with its own hands in its own laboratory. It extended research, so that we might help others outside, in other words, to intensify that attack. We recognized the shortage of physicians with special training in cancer, the shortage of research personnel with basic and other training to be research workers in the biological sciences, particularly as applied to cancer, and made provision for the trainee program and research fellowship program and made grants-in-aid to others outside the Public Health Service, to universities and to other institutions, and made provision for an advisory council.

Then, with the passage of time, the interest of the Public Health Service, even as did the interest of Congress and of folks throughout the country, grew broadly in the direction of chronic diseases encountered in the aging process. The successes in the field of control of communicable diseases, the relative successes, and the successes attendant upon childbirth and in the care of the pregnant mother and in the care of the child in that earliest period of its life, when it was very susceptible to many things, made our population increase by lowered death rates among other things and our range of life began to extend.

Mr. SCHWABE. At the latter end.

Dr. SCHEELE. Yes, sir, at the latter end. And so came this rather universal increase in interest.

Now, gentlemen, it is interesting to watch that increase, historically. States like New York State and Massachusetts set up a State action program against cancer before the turn of the century. The first State Cancer Hospital, the Bratwick Laboratory in Buffalo was actually set up by the State of New York along about 1896 or 97. Massachusetts began a concerted attack on chronic diseases and particularly on cancer before the turn of the century too.

Now we have that concern in all the States of our country. And so, gradually, an evolutionary program began to manifest itself in the National Institutes of Health. There came a National Heart Act several years ago; previous to that, a Mental Health Act, and then a Dental Health Act in recent times. Just last year, in the last Congress, there were created two new institutes, one called Arthritis and Metabolic Diseases, and the other called Neurology and Blindness. We created one institute, because we had no institute created by law, for socalled bacteriology—we called it the Microbiology Institute. Actually, that was just putting a new name over the door of a program that was already there. And so the National Institutes of Health consist of these seven institutes.

The Clinical Center is the new building which is under construction. The other buildings were built in the period 1937–38, except for one of the laboratories, which was built during the last war, for work in very, very infectious diseases, where they needed special features built into the building to protect the workers. The Public Health Service

has traditionally done research in some of the communicable diseases; which are, as far as the laboratory goes, almost too virulent, too "hot" to handle, because the workers get them and they die. We have had many of our people give up their lives doing some of this research.

So we constructed a building that would give them mechanical protections. The air, instead of moving at will in the room, is always drawn off over their hands and away from them, and it is not being expelled into the air outside, where it might cause harm. It is run out through incinerators, electric grids. Precautions have been built into the building itself. That was built during the last war.

Increasingly there developed concern, and this began on some of our councils, although we had it too, within our own research staff, that our programs on cancer and other illnesses were too limited in the sense that they were directed at what could be done in a test tube or what could be done on a mouse or some other animal. And so the clinical center came along, to furnish a broader base for that research.

Mr. SCHWABE. So that you could use the human patients if necessary as guinea pigs?

Mr. SCHEELE. Yes, sir; without harming them.

Mr. SCHWABE. Yes.

Dr. SCHEELE. So that there would be a comprehensive program. And that is the thing that we are headed for.

Mr. SCHWABE. And who will be admitted to that institution for clinical observation and therapeutics?

Dr. SCHEELE. The ticket for admission broadly will be that the person must be an individual who is suffering from the kind of disease that they want to study at that particular time.

Mr. SCHWABE. Not just patients at random, or generally.

Mr. SCHEELE. No, sir. And those who want to come themselves and whose physicians are willing to have them come. In other words, this will not be a general medical care institution. This will be exclusively a research center.

If we are studying cancer of the breast, and a woman with such cancer should come and develops some very bad tonsils, in the course of that study and at some points she quiets down enough so that the tonsils can be removed, obviously we will have to give her good medical care and do something on her tonsils. But our intention is not to have an institution giving general medical care for the sake of giving general medical care. The primary research areas will be cancer, mental health, heart disease, arthritis, and the related diseases, and some work in infectious disease. It will be more in the chronic diseases than it will be in the infectious diseases. Those broad areas will be the program. We hope to start it slowly, to gradually build it up, as our own competence to handle it grows.

Mr. SCHWABE. That is going to take considerable staff and personnel, is it not, to handle that?

Dr. SCHEELE. Yes, sir; it will take an expansion in staff, although probably well over half of the staff is already assembled.

Mr. SCHWABE. And working presently?

Dr. SCHEELE. Yes, sir.

Mr. SCHWABE. Now, then, have you provided for bringing in, may I say, experts, or those who have specialized in this line? Are you making preparations for that, those who have had the privilege of fellowships, for instance, and so on, in these special lines?

Dr. SCHEELE. Yes, sir. We are gradually, insofar as the money at our disposal will permit us to do it, adding new people, not too many, top level people, against the day when that building is completed. For example, in the field of research in cardiovascular diseases, Dr. James Shannon, who was an expert in this field and a very broad research man outside, has been hired to be the Director of Research, at the head of the research program, within the Heart Institute. And he is on the job slowly assembling a top level staff.

Mr. SCHWABE. And you expect to be in operation in the new building about when?

Dr. SCHEELE. Approximately 2 years, about the end of 1952 or early 1953.

Mr. SCHWABE. That is all for the present. Thank you.

Mr. FOGARTY. Mr. Busbey?

COMBATING BIOLOGICAL WARFARE ATTACK

Mr. BUSBEY. Dr. Scheele, I was tremendously interested in your discourse on the subject of atomic and biological warfare and particularly biological warfare. It happened that a subcommittee on which I served, held executive sessions during the unification-bill hearings with many of our outstanding scientists, including Dr. Vannevar Bush on the subject of biological warfare. I gathered from their testimony generally that while we had been spending a great deal of money and placing emphasis on atomic warfare, Soviet Russia had been spending the major portion of their effort on biological warfare.

I had several conferences later with Dr. Vannevar Bush and his staff and a scientist friend of mine over in the Pentagon Building. This scientist friend of mine showed them how easy it was to force germs into the water systems of all of our cities, merely by getting a little one-quarter horsepower pump and attaching it to a faucet in your apartment and forcing the germs back into the water system, which was very dangerous; could dispose of entire populations of cities very easily.

For that reason I was not so much interested in the atomic warfare as I was in combating this biological warfare.

In looking at this book which was just handed me entitled "Health Services and Special Weapons Defense of the United States Civil Defense," I am glad to note, on page 250, the amount of indexes under biological warfare. While I have been out of touch with this subject for over 2 years, I take it from your general remarks that there has been quite a bit of research and work done on means and methods of combating this biological warfare if it should hit our country.

Dr. SCHEELE. Yes, sir. That is correct. The Public Health Service is doing some major work in this field in relation to the problem which you mention, namely, putting bacteria into water supplies. The Chemical Warfare Service of the Department of the Army has been very cooperative, and through their efforts and others, much information which was formerly classified and not open information became available for use in this publication and other publications which are coming. They have worked with us, and we are now continuing the research on and development of a water filter, which will

be very useful for detecting contamination, a far simpler procedure than we have ever had before in bacterial determination.

We are also working with a chemical compound in one of our laboratories. Chlorination, as we practice it, would take care of ordinary contamination at the point where we are chlorinating and for a very short time beyond that point, but by the time the water flows out through the closed system, in spite of the fact that it seems to taste of chlorine slightly, it does not contain enough free chlorine to be an effective sterilizing agent. In Britain during the war they did chlorination so that at the end of a main, at the smallest main down at the end of the line, they could get one part of chlorine per million there. That meant that the amounts along the line were pretty heavy. But when you have bombing, you have to consider that kind of thing. You have to be willing to have a lot more chlorine in the mains. Chlorine during wartime becomes a difficult supply problem. And that, of itself, could cause some very difficult problems.

This new agent which we are working on, if successful, might give us some lasting effect on the water even after it has moved away from the point where it is put in. One of the fascinating things about it is the fact that when laboratory glassware which is going to be used in bacteriology for growing bacteria, is rinsed in it and rerinsed in clear water, distilled water many times, bacteria won't grow in it, because there is a residue which remains behind, which doesn't seem to wash off, which remains and inhibits the growth of bacteria. So we are continuing to work on methods of control of these problems.

Mr. BUSBEY. There are activities on which chlorine has no effect?

Dr. SCHEELE. Yes, sir; that is correct; although most of the bacteria that we are concerned with, the colon-dysentery group are amenable to chlorination.

Mr. BUSBEY. If there was any cause for the enemy wanting to poison our water system, they certainly would not do it at the pumping station, when they can force it into the faucet in a home or an apartment, in the various communities. That would be your difficult problem.

Dr. SCHEELE. Yes, sir. We have another problem which I should point out to you and this again is one of the reasons why I mentioned earlier how important our basic health services are, not only those that are official services in counties, cities, States, and in the Federal Government, and in the national institutes of health, but also in our various public health laboratories around the country and the universities everywhere. It will be exceedingly important if anyone uses these weapons against us to do early identification. So our first job is to have a network of reporting, so that we know when something has happened which is unusual. We currently are watching attendance records, for example, in some industries and some business firms, and within parts of the Public Health Service. The most sensitive index as to what is happening to people is to see what happens to attendance. If, for example, over a period of 2 days a fourth of the Members of Congress should not come, and let us say that at that particular season of the year you would ordinarily have only a hundredth absent, one would wonder immediately what was going on, and would want to check back and find out why this fellow was out and that fellow was out. This whole business of intelligence, of becoming suspicious of what has happened, is the first thing that has to occur.

Then we have the problem of identification and speedy identification of what the problem is, what is causing it. And, of course, in an effort to make it impossible for the person attacked to be able to protect himself, one suspects that our enemies will try to develop some bacteria which are variants of those we know. In other words, they can develop some new strains. This is not a direct example, but in the field of influenza, after 1933, after a virus had been identified by Dr. Andrews in England as a cause of influenza—that was the first time we knew that—at first blush everyone thought the influenza problem was solved. "We know the cause. We have found the virus." Then somebody said, "If we can make a vaccine, we are all set. We can prevent this thing, like we do smallpox." Pretty soon they discovered that they had several strains within that virus. And today we have Virus A, we have Virus A-prime, and we have a Virus B. And how many new and additional subgroupings will come along, we don't know. We are beginning to say today, "This was the virus A-prime identified in Pittsburgh in the winter of 1949 to 1950." And there is always the question of whether a virus made with the A-prime strain from Pittsburgh is the same as the A-prime strain which is in existence in England in this current outbreak they have had, a very severe one in northern England.

So one has that problem, then, of developing a network of competent people who are in an organized program, to immediately go into identification, but not only the gross identification of the bacterium that is used, but of this very detailed identification which can't be done everywhere, to try to see if we have variant strains which by some chemical treatment or radiation or something else someone has fixed up in a way that our ordinary procedures to protect ourselves won't work. Is it possible, for example, to develop a strain of typhoid that would not be susceptible to chlorine? In theory, it is possible. Those strains we have, those that have been living in the United States are killed by chlorination; but what about some new one that is somehow or other developed as a variant of those known now? It is like a checker game or a chess game, really. And our job in the Public Health Service, working with the armed services and the Federal Civil Defense Administration, is to stay as far ahead of this thing as we can. And there is a good cooperative program.

Mr. BUSBEY. That is all, Mr. Chairman.

CANCER RESEARCH

Mr. HEDRICK. Might I ask a question?

I wonder if you would bring the committee up to date on the progress of cancer research. What has been done in the last 6 to 12 months?

Dr. SCHEELE. Dr. Hedrick, with your permission, I would like to ask Dr. Heller, when he comes, to cover that.

Mr. HEDRICK. That would be all right.

Dr. SCHEELE. I have my irons in a lot of fires in the Public Health Service these days, and I cannot give you as good a report as Dr. Heller, who is right on top of that whole program, can give you. If that is all right, I would like to ask him to do that for you.

Mr. HEDRICK. That is all right.

Mr. FOGARTY. Are there any further questions?

Mr. SCHWABE. I take it, Mr. Chairman, that as far as the development of cancer research is concerned, which Dr. Hedrick referred to, that will be covered later, then.

I wanted to go into that, but I know there would be an opportunity later, and likewise with reference to some of the other diseases.

Mr. FOGARTY. We will follow this list right down the line.

Mr. DENTON. Do you have anything on the cancer proposition like this book?

Dr. SCHEELE. In terms of the results of research? Not in ordinary sense. There are, of course, scientific publications, like the Journal of the National Cancer Institute, which describe research done.

Mr. DENTON. I mean something that a layman like me could understand.

Dr. SCHEELE. Our difficulty lies in the fact that those publications are highly technical. I will try to get them to cover some of these things described in such a way that they make understanding a little easier.

RECENT INFLUENZA OUTBREAKS

Mr. FOGARTY. Doctor, have you any idea of the number of deaths that have been caused by this influenza epidemic in northern England and Ireland this past few weeks?

Dr. SCHEELE. Yes, sir. We have some data on that which I do not have with me, which we can bring for the record.

Mr. FOGARTY. Do you have the number of people who lost their lives because of the epidemic right after the First World War in this country?

Dr. SCHEELE. Yes, sir; we have data on that. I should say for your understanding that when you see those figures on the British influenza outbreak you have to take a part of them with a grain of salt. They are not accurate. We have found this, for example: In the town of Gordo, Ala., recently it was reported that about half of the town's population of 2,000 were seriously sick with influenza. When one went into the community and investigated, he found there were a lot of people with colds, a lot of people with some sort of respiratory infection. The typical influenza diagnosis is based on a few aching joints and fever, and that sort of thing. This particular influenza is running about 3 to 5 days. It is debilitating enough that people don't work. But in Gordo they finally found just a few cases down there where any physician would say, "This is a case of influenza." And ordinarily in influenza one doesn't do any very complicated laboratory procedure. You can make a diagnosis in the laboratory, but that is not done in the usual routine. Reason: there isn't anything much to do except bed rest when you discover it.

And it isn't a serious disease, except that in England this time the deaths are not influenza deaths in the ordinary sense, but they are deaths from kidney disease, deaths from heart disease, cases of people who are pushed a little over the line because they have other chronic illnesses. And the deaths are mostly in the age group above 55, which is not typical of the pandemic we had in 1918. Then, babies, children 2 to 10, children 10 to 20, died almost in proportion to people in the older age groups, although the older people will always get a little impact from influenza, and it will take more of them over the line of their reserve and cause their deaths. But in the British expe-

rience, the age range is almost entirely over 55 years of age. It has, however, been a serious problem, just in terms of time lost, for example, in the coal mines, and so on.

(The following information was supplied for the record:)

INFLUENZA IN ENGLAND AND WALES, 1951

Our information has been received from the General Register (vital statistics) Office for England and Wales. As we do in this country the British collect their current data mainly from the cities and do not sum up national figures for some time after. The following data are for deaths by weeks, as reported in the 126 "great towns" which the English use as their barometer of current conditions.

Week	Deaths	
	All causes	Influenza
Peak week 1949–50	5,955	52
Peak week 1950–51	10,328	1,099
Latest week reported, 1950–51	7,688	492

It may be seen that the increase in total deaths, while not as great proportionately as that in deaths assigned to influenza, is still very great. A very large proportion of the deaths have occurred in the older age groups, leading to their assignment to chronic conditions present in the victims prior to the onset of respiratory infection. It is clear from the data received that the epidemic is definitely on the wane.

INFLUENZA IN 1918-19

The 1918 pandemic occurred in the last 4 months of 1918 and the first 6 months of 1919. It was estimated afterward that a total of 548,000 excess deaths from influenza and associated causes occurred during that period. It is estimated that the "normal" number of deaths for the Nation should have been about 152,000 for that period. We have only estimates of the numbers and rates because 18 States were not in the death registration area at the time.

In 1918 the estimated population of the United States was 103,202,000. The pandemic of that winter therefore took the lives of one-half of 1 percent of the people of the country.

The normal death rate for influenza and pneumonia at that time is estimated to have been about 147 per 100,000 population. In 1949, with a population almost half again as large, the country experienced 40,042 deaths from these causes or only about 27 per 100,000 population. The great decline is due to the advances in treatment and medication which came into use in recent years.

Mr. FOGARTY. Thank you, Doctor. Do you have any further statement to make at this time?

Dr. SCHEELE. No, sir.

Mr. FOGARTY. You will be in attendance here?

Dr. SCHEELE. I will try during most of the hearing.

Control of Communicable Diseases

WITNESSES

DR. JUSTIN M. ANDREWS, DEPUTY DIRECTOR IN CHARGE, COMMUNICABLE DISEASE CENTER
LEONARD B. ABBEY, BUDGET AND FISCAL OFFICER, COMMUNICABLE DISEASE CENTER
DR. LEONARD A. SCHEELE, SURGEON GENERAL
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Communicable Diseases

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
Appropriation or estimate	$7,350,000	$6,415,000	$6,050,000
Transferred from—			
"Control of venereal diseases, Public Health Service," pursuant to Public Law 583	188,000		
"Salaries and expenses, Entomology and Plant Quarantine, Agricultural Research Administration," pursuant to Public Law 759		50,000	
Adjusted appropriation or estimate	7,538,000	6,465,000	6,050,000
Unobligated balance, estimated savings	−35,722		
Savings under sec. 1214		−250,000	
Obligations incurred	7,502,278	6,215,000	6,050,000
Comparative transfer from "Operating expenses, National Heart Institute, Public Health Service"	76,300	45,600	
Comparative transfer to—			
"Engineering, sanitation and industrial hygiene, Public Health Service"	−266,820		
"Salaries and expenses, division of service operations, Federal Security Agency"	−6,400		
Total direct obligations	7,305,358	6,260,600	6,050,000
REIMBURSABLE OBLIGATIONS			
Reimbursements for services performed	30,269	40,000	40,000
Total obligations	7,335,627	6,300,600	6,090,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
1. General disease-prevention and control activites	$3,115,968	$3,305,100	$3,410,000
2. Specific disease-prevention and control activities	3,620,894	2,370,400	2,090,000
3. General epidemic and disaster aid	7,232	40,000	40,000
4. Administration	561,264	545,100	510,000
Total direct obligations	7,305,358	6,260,600	6,050,000
REIMBURSABLE OBLIGATIONS			
2. Specific disease-prevention and control activities	30,269	40,000	40,000
Total obligations	7,335,627	6,300,600	6,090,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	1,757	1,480	1,298
Full-time equivalent of all other positions	11	11	10
Average number of all employees	1,434	1,242	1,186
Personal service obligations:			
Permanent positions	$5,091,208	$4,576,592	$4,547,387
Part-time and temporary positions	35,162	32,200	32,200
Regular pay in excess of 52-week base	16,261		13,200
Payment above basic rates	34,069	32,700	32,700
Total personal service obligations	5,176,700	4,641,492	4,625,487
DIRECT OBLIGATIONS			
01 Personal services	5,155,778	4,608,917	4,592,912
02 Travel	210,331	201,050	210,130
03 Transportation of things	115,865	88,390	79,540
04 Communication services	44,838	37,759	37,630
05 Rents and utility services	173,957	162,700	94,370
06 Printing and reproduction	34,840	36,200	36,100
07 Other contractual services	173,090	112,400	98,700
Services performed by other agencies	3,300	3,000	3,000
08 Supplies and materials	1,068,387	687,790	557,700
09 Equipment	359,315	273,394	287,618
11 Grants, subsidies, and contributions	988	1,000	1,000
13 Refunds, awards, and indemnities	669	700	700
15 Taxes and assessments		7,300	10,600
Unclassified (general epidemic and disaster aid)		40,000	40,000
Total direct obligations	7,305,358	6,260,600	6,050,000
REIMBURSABLE OBLIGATIONS			
01 Personal services	20,922	32,575	32,575
02 Travel	1,227	2,000	2,000
03 Transportation of things		170	170
04 Communication services		100	100
07 Other contractual services	499	650	650
08 Supplies and materials	7,544	3,005	4,505
09 Equipment	77	1,500	
Total reimbursable obligations	30,269	40,000	40,000
Total obligations	7,335,627	6,300,600	6,090,000

CLERK'S NOTE—Above schedules do not include $100,000 submitted as a budget amendment (increase total to $6,150,000) for 1952, contained in H. Doc. 66.

Mr. FOGARTY. We generally follow the line-up in the printed bill, but the people from the Communicable Disease Center are here, headed by Dr. Andrews, and because of the necessity of their getting back to Atlanta, we will hear from them on the item for control of communicable diseases.

Dr. Andrews, do you have a statement for the committee?

Dr. ANDREWS. Yes, sir; I do.

GENERAL STATEMENT

Communicable disease control during any national emergency aims at the same objectives and utilizes the same approaches as in times of peace. Its goal is to increase effective manpower by preventing disease. Sick persons can't work. They can't produce or prepare their own food. They absorb the services of critically needed physicians and nurses, of pharmacists, technicians, and other attendants. To the extent that illness is preventable, this dissipation of precious skills is unnecessary. The basic measures for preventing it are similar in principle whether the man-hours thus salvaged are used in normal agriculture and industry, in accelerated production of military sup-

plies, or in the chaotic reconstruction following enemy attack. These latter necessities invariably increase—they never diminish—the urgency of communicable disease control. Adequate means must be maintained in peace and in war for reporting illness, for identifying it accurately, for preventing its spread, and, where knowledge of its nature, transmission and control is lacking, for solving these problems.

SERVICES PROVIDED

This item is to defray the costs of controlling preventable diseases not otherwise provided for, generally in cooperation with States in meeting disease-prevention problems which are beyond their resources and others which are federally created or interstate in nature. Services, and in some instances, equipment and materials are supplied usually with substantial State participation in costs. Services include field and laboratory investigation of endemic diseases, reference laboratory diagnosis, technical development of new and improved control practices and their demonstration to State and local health personnel, in-service and laboratory technician training, the production of audio-visual training materials, operational assistance, epidemic and disaster aid, et cetera. This cooperation with States has the effect of maintaining high standards of communicable disease control where these exist, of elevating others, and of uniting while strengthening all the Nation's resources against infectious disease.

ESTIMATE FOR 1952

The 1952 estimate of $6,050,000 reflects a total decrease of $460,600 from the 1951 comparable appropriation, a net reduction of 182 positions. Comparing the estimate with the appropriation base, there is a net saving of $135,800 after deducting the $250,000 reserved under section 1214 of the General Appropriations Act of 1951, and a nonrecurring rent item of $74,800, and absorbing unavoidable increased costs such as within-grade and longevity advancements, pay in excess of 52-week base and social-security tax contributions, all of which total $89,224. Of the estimated $6,050,000, approximately 47 percent of the funds are proposed for research and development, 16 percent for training, 29 percent for operations and surveillance, and 8 percent for administration.

FURTHER REDUCTION IN MALARIA AND TYPHUS WORK

Most of the reduction in the 1952 estimate is due to a decrease in malaria and typhus control coverage. Malaria transmission has diminished to the vanishing point but vector mosquitoes remain abundant. Under the right combination of circumstances, transmission might occur from old relapsing cases or from persons infected abroad. To hold the gains already achieved, therefore, it is important to maintain small survey-and-prevention teams in the States where transmission is most likely to occur, based on previous experience. This activity will be intensified in extracantonmental and defense industrial areas because of the unusual concentration and turn-over in population. During and since World War II some $56 million ($45 million Federal) have been spent for preventing malaria.

If vigilant survey-and-prevention services are maintained, a comparable expenditure probably could be avoided should malaria again be imported and disseminated by returning troops infected overseas. Similar shifts from control to surveillance status are proposed in the typhus control program, thus accounting for further reduction in the 1952 estimate.

INCREASES REQUESTED

These budgetary decreases are offset partially by modest increases for epidemiologic, labratory, and technical vector control services. These are to continue or expand field studies of diseases such as poliomyelitis, encephalitis, diarrhea, and certain fungal infections which have special military as well as civilian significance; to improve the reporting and investigation of communicable diseases, especially outbreaks; to increase types of laboratory services to States where it is not practicable to maintain them locally; to design, test, and operate in various parts of the country equipment for making quantitative collections of disease-producing agents from the atmosphere; and to devise and test more rapid methods of identifying such agents. A small sum is included to provide for participation in the interagency field studies in the Arkansas-White-Red River Basin as outlined by the President in his message to Congress dated May 22, 1950 (approval of H. R. 5472).

OPERATIONS NECESSARY IN TIME OF WAR

All of these activities are normal functions in the control of communicable diseases, but some of them also provide the essential foundation for the special operations which would be necessary in time of war. Probably the most important application of communicable-disease control during modern defensive warfare would be civilian protection against biologic hostilities. It would be up to the health services to alert civil defense authorities concerning the specific nature of biological attacks early enough to provide the necessary vaccines, drugs, antibiotics, and blood products, as well as medical, nursing, and decontaminating services. For this purpose, the peacetime methods of apprehending unusual numbers or concentrations of disease-producing agents to which man is involuntarily exposed should be reported, investigated, and explained as promptly as possible to identify those caused by enemy acts of sabotage, to allay public hysteria, to expedite proper treatment, and to prevent spread of infection.

The funds requested under this appropriation are for normal communicable disease control requirements and will not provide for special defense needs which may arise in the future. However, they will supply some of the basic research, a few trained key personnel, and the nucleus of an effective organization to cope with the special as well as normal health problems of defense if these are ever needed.

That is all, Mr. Chairman. I would be very happy to answer whatever questions you care to ask.

Mr. FOGARTY. Thank you.

AVAILABLE FUNDS

You had available in 1951, this fiscal year, $6,415,000?

Dr. ANDREWS. That is correct.

Mr. FOGARTY. You had a transfer from the Department of Agriculture for studies of insecticides and fungicides of $50,000. That was a transfer in appropriations from the Department of Agriculture?

TRANSFER FROM AGRICULTURE FOR SPRAY RESIDUE STUDIES

Dr. ANDREWS. Yes, sir; a transfer to study toxic residues on fruits and vegetables.

Mr. FOGARTY. And what was that for?

Dr. ANDREWS. That was to investigate the disease hazard arising from the consumption of fruits and vegetables which have been treated with economic poisons to improve their production and to get rid of the pests.

Mr. FOGARTY. What were you doing in this field before you received this $50,000?

Dr. ANDREWS. Nothing specifically in the field of assaying the public health risk of these agricultural practices. But we had been doing a great deal of work on economic poisons which are used in the control of communicable diseases, such as insecticides, rodenticides, fungicides, and so forth.

Mr. FOGARTY. And what have you done with this $50,000 this year?

Dr. ANDREWS. A laboratory has been located in the State of Washington, personnel have been recruited, and studies have been started, in determining the actual hazard, particularly the chronic hazard. It would take some time, of course, to do that. That has been occasioned by the consumption of these apples, particularly. It is in the middle of the apple area. That is in order to see what the hazard is and how it might be overcome.

Mr. FOGARTY. And that work has already been started?

Dr. ANDREWS. It has been started.

Mr. FOGARTY. How many people do you have employed?

Dr. ANDREWS. We have eight people employed.

Mr. FOGARTY. You have eight people employed at the present time. Is there any money in this budget of yours for the continuation of that work in 1952?

Dr. ANDREWS. No money is allowed for this purpose.

Mr. FOGARTY. Will that work, if it is continued, be justified on the same basis as it was in this past year, before the Subcommittee on Agriculture?

Mr. HARLOW. Mr. Chairman, may I speak to that?

This is an item that fell in the crack, if we may use that expression, and it is neither in the Agriculture budget nor our budget. I have discussed that quite recently with the people in the Bureau of the Budget, and the gist of the conversation I had with them was this—that had it not been overlooked—and I might say we are just about as guilty as they are on that end, and more so—they would have allowed for it. However, they would not have increased the total public health service budget on that account. They would be willing, in other words, that we reduce some other items in order to increase this one.

Now, it so happens that when you get to the cancer appropriation we will be telling you that the budget carries $200,000 more than we need to liquidate contract obligations. I would suggest that as a painless method of taking care of this, part of that $200,000 be added to this appropriation.

Mr. FOGARTY. What would you suggest would be the proper amount to carry on this study on a full-year basis?

Mr. HARLOW. I will ask Dr. Andrews to speak to that.

Dr. ANDREWS. $100,000 is what has been estimated. $50,000 was designed only for a half year.

Mr. FOGARTY. I see.

FUNDS FROM HEART INSTITUTE FOR STREPTOCOCCUS SERUM

You have applied for a transfer from the National Heart Institute of $45,600.

Dr. ANDREWS. Yes, sir. That is for the provision of streptococcus typing serum.

Mr. FOGARTY. That is for producing it, is it?

Dr. ANDREWS. Producing it. This is an item which is an unprofitable one for commercial concerns and for a number of years now we have been using a serum which has been purchased from the New York State Health Department laboratory. But that is no longer available, and we are having to set up our own production facilities for this serum.

This serum goes to the research agencies, which are interested in working on streptococcus infections, including rheumatic fever.

Among them are the medical departments of the Army, Navy, the National Heart Institute, the American Heart Association.

AVAILABLE FUNDS 1951 AND 1952

Mr. FOGARTY. And you had withheld from you, under section 1214 of the general appropriation act, $250,000 and there is nonrecurring items a deduction of $74,800. You had actually available to you in 1951, $6,185,800, and you are asking for $6,050,000; which shows a decrease of $135,800.

There is a decrease of 182 positions for 1952.

Dr. ANDREWS. Yes.

INCREASES IN GENERAL DISEASE PREVENTION AND CONTROL ACTIVITIES

Mr. FOGARTY. On general disease prevention and control activities you show an increase of 26 positions, at a cost of $150,200. What are these increases for specifically, and what projects do they include?

Dr. ANDREWS. These increases are for epidemiology and laboratory services, and for improvements in the technical vector control services.

In epidemiology we show seven new positions, which are to be used in field investigations of diseases, some of which are noted above.

The increase in laboratory services is for expanding virus reference diagnostic facilities, in response to State requests, and continuing with the planned expansion of the clinical pathological laboratory.

The technical vector control service increases are for starting our part of the study on airborne diseases, primarily in designing equipment necessary for quantitative air sampling, locating these bits of

equipment of different parts of the country and operating them under varying conditions to get background data as to the normal flora of the atmosphere; generally trying to improve what we realize is at present rather crude and not too scientific.

I must say that we are not the only people who are working in this general field. I think that it is a problem which is going to take the combined efforts of as many good brains as we can bring to bear on it.

It is necessary to be able to measure the disease potential of the air under normal conditions so that we can recognize special disease hazards under unnatural conditions.

Mr. FOGARTY. Does that take care of all the 26 positions?

Dr. ANDREWS. Yes, sir.

DECREASE IN SPECIFIC DISEASE CONTROL ACTIVITIES

Mr. FOGARTY. Under your specific disease control activities, you show a decrease of 203 positions and a decrease in dollars of $280,000.

Dr. ANDREWS. The decrease is due almost entirely to reduction in the malaria and typhus control activity.

Mr. FOGARTY. That is what you referred to in your statement, is it not?

Dr. ANDREWS. That is right. We are anxious to maintain the surveillance features which I mentioned because we believe that they will probably prevent a repetition of the heavy costs which we had to bear after the last war. When the soldiers came home and brought malaria with them, it was necessary to do blanket insecticiding in many parts of the country to help the States.

If this surveillance is continued, we have every reason to believe it should preclude the necessity for such a large expenditure for controlling the disease again.

BREAKDOWN OF APPROPRIATION BY ACTIVITIES

Mr. FOGARTY. I have a breakdown of these general disease prevention control activities, and also the specific disease prevention activities. We will put that into the record at this point.

(The material referred to is as follows:)

Control of communicable diseases

Project and subproject	1952 base	1952 estimate	Increase or decrease
General disease prevention and control activities	$3,259,800	$3,410,000	+$150,200
Field studies on disease	282,550	314,800	+32,250
Laboratory technologic services	829,300	893,100	+63,800
General veterinary public health activities	141,100	137,600	−3,500
Technical vector control services	1,121,400	1,184,150	+62,750
Training and production of training materials	530,750	530,750	0
General operational functions	354,700	349,600	−5,100
Specific disease prevention and control activities	2,370,400	2,090,000	−280,400
Diarrheal diseases	286,400	286,400	0
Malaria	992,800	716,200	−276,600
Typhus fever	269,100	235,000	−34,100
Poliomyelitis, encephalitis, and other virus diseases	433,900	464,200	+30,300
Plague and other rat-borne diseases	284,000	284,000	0
Q fever	68,800	68,800	0
Leprosy	35,400	35,400	0

AGENCY ESTIMATE FOR 1952

Mr. FOGARTY. What did you ask the Bureau of the Budget in your over-all appropriation?

Dr. ANDREWS. We requested $7,011,000.

Mr. FOGARTY. They cut you more than $900,000; did they not?

Dr. ANDREWS. Yes, sir.

Mr. FOGARTY. On page 20 you show an increase of $9,000 in rents because General Services have taken over that responsibility.

Dr. ANDREWS. Mr. Abbey, could you answer that question about increase in costs and rents and things?

Mr. ABBEY. The explanation of increased costs in rents and utilities was to be corrected in that particular statement, but it was too late to get it through.

This increase in rents and utilities is not occasioned by the transfer to Public Buildings Administration, but is caused by increased costs in the remaining rents and utility items, because of the general increase in costs everywhere.

CHANGES IN LANGUAGE

Mr. FOGARTY. What are these changes in the language of the bill this year? Take the first one and go right down.

Dr. ANDREWS. Do you mean "except as otherwise provided for"?

Mr. FOGARTY. Yes.

Dr. ANDREWS. Some communicable diseases which are provided for otherwise are venereal diseases, tuberculosis, and certain chronic diseases. The Communicable Disease Center does not work with those extensively except that we maintain, in collaboration with the VD division, the VD serology laboratory in Atlanta.

We also have, in collaboration with the TB division, the tuberculosis evaluation laboratory in Atlanta. That is because both of those studies are of a developmental nature and are a much more closely allied type of work than would be other communicable diseases.

The words "and preventable" are added because we are developing in clinical pathology an effort at improving this activity along the same pattern that we have with our diagnostic laboratories and surveys.

Clinical pathology is used to make laboratory measurements of symptoms or of metabolic changes, which apply not only to communicable diseases but to other diseases which are not communicable and are preventable.

So we wish to have the "and preventable" included there. Some of our toxicologic research, of course, is concerned not with disease—that is, not with communicable disease—but is concerned with what we regard as preventable morbidity.

The purchase, erection, and maintenance of portable buildings has been to supply primarily our laboratory services with buildings which are not usually available commercially, such as buildings like laboratory-animal houses, for example; buildings for special laboratory processes, that require particular construction, special air-conditioning and things of that sort.

We envision the use of those in the progress of this work.

Mr. FOGARTY. How much do you anticipate will be spent on that?

Mr. ABBEY. At present we anticipate only four such buildings, of the Quonset hut type. We hope that those buildings can be procured out of Government surplus, free of charge.

Mr. FOGARTY. There is no specific amount set aside in this budget for the purchase of these buildings?

Mr. ABBEY. There is no specific amount set aside. There would be some attendant cost in transporting and erecting them, probably by federally employed personnel, and laying the foundations and putting the huts together.

PASSENGER VEHICLES

Mr. FOGARTY. I notice the language includes 30 passenger vehicles instead of 20 last year.

Dr. ANDREWS. That is for replacements; yes.

Mr. FOGARTY. Under the usual regulations of the agency, are the old cars required to have been driven so many miles before turning them in?

Mr. STEPHENS. Sixty thousand miles or 6 years, if they reach either point.

AIRCRAFT

Mr. FOGARTY. And I notice two aircraft. Was that not in the bill last year?

Dr. ANDREWS. I do not think so. At least we have purchased no new aircraft. One of these is to be used in toxicologic studies and one of them is to be used in disaster aid operations. That has headquarters in Arkansas.

The two machines which we have owned for quite a number of years now, PT–17 Steermans, are just barely airworthy machines. Much of the flying that we do is very low flying and hazardous even with the very best machines.

Mr. FOGARTY. Is this to replace those two?

Dr. ANDREWS. That is right.

Mr. FOGARTY. Do you only own two?

Mr. ABBEY. We own four at this time.

Mr. FOGARTY. How old are these?

Dr. ANDREWS. These were war surplus when they were purchased. I do not know how old they are, but they were purchased, I would say, about 1945; were they not?

Mr. ABBEY. I think the average age of these is about 6 years. Probably three of them have reached the stage where the pilots are actually afraid to use the machines.

Mr. FOGARTY. Are there any questions?

Mr. HEDRIC. I have no questions.

FURTHER REFERENCE TO SPRAY RESIDUE WORK

Mr. SCHWABE. With reference to these transfers of funds from the Department of Agriculture, and the National Heart Institute, to which you have referred, I understood you to say that you have never made a study before, or have been called upon to study conditions resulting from the spraying of fruits and vegetables with insecticides and fungicides.

As a matter of fact, do you not recall that that has been done by your bureau over a course of years, whether you were paid by transfer of funds or by direct appropriation? Has not that been done before in some way?

Dr. ANDREWS. Not to my knowledge.

Mr. HARLOW. Mr. Chairman, may I speak to that?

A good many years ago we did conduct a study of some apple spray residues and reached conclusions and published them and then dropped it. We have done nothing since.

Mr. SCHWABE. I do not remember where the funds came from, but I remember very distinctly in this same committee that that subject was developed 2 or 3 years ago.

We were very much interested in it and that it must proceed with reference to apples particularly, I think.

Mr. HARLOW. Your memory is quite young, Mr. Schwabe. It was more likely 10 years ago.

Mr. SCHWABE. I was not here then.

Mr. FOGARTY. I remember we talked about it. I think there was some dispute about it. I do not know whether or not it was something the Food and Drug Administration was doing. Mr. Horan appeared before our committee.

Mr. SCHWABE. The Congressman from Washington is interested in this project. I cannot remember all the details, but I was shocked when the doctor said that this was never before us before. I remember distinctly something about it. My recollection is hazy, but it was about 3 or 4 years ago, as I remember it.

Mr. HARLOW. What we did, Mr. Schwabe, was on lead arsenate residues.

Mr. SCHWABE. I think that was involved.

Mr. HARLOW. This has to do with these other substances, like DDT, and things like that. It came up, in I think, both committees last year. The result was that you put a provision in the Department of Agriculture to transfer $50,000 to us to do the work.

Mr. SCHWABE. I think that previously it was with reference to the application of arsenate of lead. Whatever it was, it was before this committee.

Of course, I was not on the Agriculture Appropriations Subcommittee. Just to what extent the work progressed, I am frank to tell you I do not recall. But I was somewhat personally interested in watching the program at the time.

I think it it worthy of serious consideration how much money you should have for it now. I am not in a position to state, but I do think there is a field there that needs consideration and attention. I would be one of the last to say to discard it entirely and drop the item for consideration, because I do believe that it is a serious need since we are using so many of these insecticides and fungicides and other poisons against insects in order that we may be able to produce fruits and vegetables which we could not otherwise do.

Now with reference to the other transfer, it does not fall into the same category exactly.

However, you are not asking for that as a regular recurring item; is that right? I am referring to the $45,600.

Mr. ABBEY. Yes; it is.

Mr. SCHWABE. It is a recurring item?

Mr. ABBEY. Yes.

Mr. SCHWABE. And it is the same amount that you had during the current fiscal year; is it not?

Mr. ABBEY. We have in this budget $46,100, a small differential to take care of some automatic increases.

Mr. SCHWABE. What is that $45,600?

Mr. ABBEY. That is the sum transferred, which was provided in the 1951 budget. That is, the figure shown in the 1952 budget is the same as the transfer from the 1951 budget with a small addition of $500 to take care of small automatic increases involved.

There is a difference of only $500.

Mr. SCHWABE. You are not going to be able to get that transfer as you did for 1951 fiscal, then, are you?

Mr. ABBEY. No, sir. This transfer is a comparative transfer for the purpose of shifting this base item from one appropriation to another.

Mr. SCHWABE. But you are seeking to get the entire appropriation through this committee, are you not?

Mr. ABBEY. For this particular item that was shifted from the heart appropriation; yes, sir.

Mr. SCHWABE. And it will not be a transfer of a comparable item, is that right?

Mr. ABBEY. That is correct.

Mr. STEPHENS. On page 81 there is an identical figure where it is minused in that one and moved over to this one. So it is the same amount of money. It is minused out in heart and plussed into the base in communicable disease. It is, so-called, transferring the estimates.

Mr. SCHWABE. I think that is all, Mr. Chairman.

Mr. HEDRICK. Not long ago, in spraying some apples in Washington, there were two or three deaths, as I understand.

Dr. ANDREWS. I think that was parathion.

Mr. HEDRICK. That is what I heard.

Dr. ANDREWS. That has been the cause of a number of other deaths, particularly in the West. It has not always been used in agriculture in accordance with the directions which have been supplied.

Mr. HEDRICK. It is a dangerous poison. Is it still being used?

Dr. ANDREWS. Yes, sir.

Mr. HEDRICK. Why is it being used if it is dangerous?

Dr. ANDREWS. If used properly it should not injure people that are using it or the people that consume the food. It is a poison which is very readily hydrolyzed. Whenever water hits it, it breaks up into nonpoisonous components. So it has that very fine feature about it.

If it is used with proper safeguards, the operators are not exposed to it.

It is such a very effective poison that it is a quite popular one in that field of use.

Mr. HEDRICK. Can they use any kind of screen or something over their face to protect them?

Dr. ANDREWS. Yes, they can. If it is used in proper dilutions it should not be injurious.

Mr. HEDRICK. It is not hazardous in regard to sticking to the apple too much, is it?

Dr. ANDREWS. That is one of the things that we are particularly anxious to find out, if there are any residues which do remain on apples, which, while they do not cause acute poison might cause some chronic disease because of accumulation. That is not known.

We know the acute toxicity of the parathion on them.

Mr. HEDRICK. That is all.

CONTROL OF "Q" FEVER

Mr. FOGARTY. What do you know about the control of "Q" fever?

Dr. ANDREWS. We are finding out more about it. It turns out to be a rather unique disease. The organisms which cause "Q" fever are uniquely resistant to drying and to many chemicals. They can withstand relatively high concentrations of carbolic acid, formalin.

When they dry they can blow around and cause disease very readily.

In some of the work which has been carried on in connection with the California State Health Department, it has been obvious that this is almost a prototype airborne disease. Sheep can be inoculated with this disease, and a big percentage of the ewes that are bearing the lambs have huge concentrations of "Q" fever organisms in them. The placenta of those are trodden into the ground, are dried, and the organisms may be blown around.

If we take and put guinea pigs even a considerable height above the lambing ewes, these guinea pigs come down with "Q" fever even though they have had no physical contact with it. I have forgotten exactly the height, it runs out after a while, but for a number of feet above the lambing ewes the air is contaminated to the extent that it can cause infection in guinea pigs.

Mr. SCHWABE. That is in cattle, is it?

Dr. ANDREWS. Yes, sir.

One of the reasons why "Q" fever is seasonal in certain parts of the world and in certain parts of this country is that the reservoir is an animal which has its young only seasonally, like the sheep.

On the other hand, when you are dealing with cattle that are transmitters, they have their young throughout the year, and it is, therefore a hazard which extends itself pretty much over the year.

UNDULANT FEVER

Mr. FOGARTY. That is not the same as undulant fever?

Dr. ANDREWS. No. Undulant fever is brucellosis.

Mr. FOGARTY. Are you doing work on that?

Dr. ANDREWS. Yes, sir. Our public health people are very much interested in that.

Mr. FOGARTY. It also affects human beings, does it not?

Dr. ANDREWS. That is right.

Mr. FOGARTY. They get it from the cattle, do they not?

Dr. ANDREWS. They get it from cattle, from contact. It is interesting that the veterinarians themselves have the highest occupational hazard of anyone because they handle diseased animals.

Mr. FOGARTY. Do they get it from unpasteurized milk?

Dr. ANDREWS. Partly. But our own researches, I think, established the fact that more transmission is by direct contact with diseased animals. It is the veterinarians who have the high attack

rate. Next to the veterinarian are the male members of farm families, dairy families The female members and children, who are drinking the same milk, many times raw, do not have anything like the infection rate that the male members of the household have that are in contact with the cattle.

Mr. FOGARTY. Do you have any idea of the number of deaths that occurred in the calendar year 1950 due to that?

Dr. ANDREWS. No, sir; but we can supply those data for you.

(The information requested is as follows:)

The most recent available information on deaths from brucellosis is as follows:

Year:	*Number of deaths*
1948	55
1947	58
1946	69

LABORATORY SERVICE

Mr. FOGARTY. You say in the justifications:

Treatment of viral and rickettsial infections by specific drugs required accurate diagnosis. Therefore practicing physicians are utilizing, through the State laboratories, this type of laboratory service more than ever before.

So this service has been developed by you, but is available throughout the country to all physicians.

Dr. ANDREWS. It is available to physicians through State laboratories. We do not like to deal with the physicians directly because we want to be sure the State laboratories themselves are in position to render this service, if possible.

Mr. FOGARTY. Do they render that service to local physicians?

Dr. ANDREWS. They do. And if they cannot, then they refer it to us and we refer the reports back through the State health laboratories so that they are informed.

POLIOMYELITIS

Mr. FOGARTY. What is the biggest problem you are faced with at the present time?

Dr. ANDREWS. I would say it is probably poliomyelitis, in the mind of the public at least. That is the most important communicable disease problem right now. It strikes terror in the hearts of the parents from one end of this Nation to the other. The actual number of deaths caused by it are not as considerable as by other diseases, but the crippling and deformity of children is something that makes a big appeal to us for the parents.

Mr. FOGARTY. Is multiple sclerosis a communicable disease?

Dr. ANDREWS. We have not considered it so.

Mr. FOGARTY. You do not know whether it is or not, do you?

Dr. ANDREWS. That is right.

Mr. FOGARTY. Are there any further questions?

Mr. SCHWABE. But you do consider poliomyelitis, commonly known as polio, do you not, as a communicable disease?

Dr. ANDREWS. There is no doubt about that, sir. It is transmitted experimentally from person to person or from a person to certain animals.

Mr. SCHWABE. And the treatment, of course, is generally recognized as isolation and is considered important on that account?

Dr. ANDREWS. In stages of it; that is right.

Mr. SCHWABE. So far as the cause of the disease is concerned, other than the communicability of it, there is very little known; is that not true?

Dr. ANDREWS. It is known that different strains of the virus have different clinical characteristics, different immunological characteristics. That much is known.

And there have been some measurements of particle sizes, the size of the particles of virus.

But as to the most important methods of communication of disease from one individual to another, and as to what measures can best be taken to prevent that spread, we are still working on that.

Mr. SCHWABE. And very much in the dark, so far, are you not?

Dr. ANDREWS. Not as much as we were.

Mr. SCHWABE. It is no respecter of persons, is it?

Dr. ANDREWS. No.

Mr. SCHWABE. Apparently it is no respecter of persons in various stages of life.

Dr. ANDREWS. That is true.

Mr. SCHWABE. And the poor and the rich and the humble and those who live in luxury and affluence seem to contact it almost as readily as the others.

Dr. ANDREWS. Fully as much so.

Mr. SCHWABE. And just why that is we do not know; is that right?

Dr. ANDREWS. That is true.

IMPORTANCE OF PUBLIC HEALTH TO THE EMERGENCY

Mr. FOGARTY. Do you feel, Doctor, that your work in the field of public health is just as important, or more important, in view of the emergency that we might be facing?

Dr. ANDREWS. I think it will get progressively more important with the urgencies of the emergency. The urgency of saving physical effectiveness, to me, is of prime concern, not only to the producers of the Nation, but to the medical attendants of the Nation.

I am referring to the unnecessary use of doctors and nurses and pharmacists and such people and their facilities in cases of disease, which can be prevented. It is much cheaper in the long run to prevent them than it is to take care of them after they are caused.

We are having these shortages which are demanding more and more skills. It seems to me that the sensible thing to do is to redouble, if anything, our preventive efforts now in order to save more of these other skills and liberate them for other purposes.

FEDERAL FUNDS FOR RESEARCH

Mr. FOGARTY. I agree with you a hundred percent. But there are some people that do not believe in the expenditure of Federal funds for research. In fact, they claim nothing has ever been accomplished by any Federal funds that have been appropriated.

Dr. ANDREWS. I think there has been eloquent testimony by Dr. Scheele on that.

Mr. FOGARTY. I know. But there are still some that contend it is just like throwing money away.

Dr. SCHEELE. Mr. Chairman, if I may add one word of explanation, in the range of research that has to be done, there are methods that have to be taken into consideration in these fundamental problems.

Very often these people attack the programs saying that they only give employment to people. What they want is not a research program on poliomyelitis for 1 year or 10 years, or 20 years, but to see a solution of the polio problem. I think it is that which makes them skeptical of spending research money. It is because it is money spent and yet we do not know the answers. Yet the fact is—and folks outside say it—that we are getting more knowledge faster through the range of the millions and trillions of medical problems that exist than we ever had in the history of our country or the world before. We are getting results faster; we are beginning to make a greater impact on more diseases more quickly now than we ever did before.

But we still have great dark areas, great gaps, and in some instances we are closing in many little fundamentals and pieces of this tremendous puzzle, but still we do not have that final crucial one within our grasp.

CONTROL OF SOME DISEASES

Mr. FOGARTY. But in the field of typhus and yellow fever and malaria and smallpox, you have conquered those fields, have you not?

Dr. SCHEELE. Pretty well.

Mr. FOGARTY. You are able to control them and, in many cases, prevent them.

Dr. SCHEELE. That is correct.

Mr. FOGARTY. That was accomplished through research, was it not?

Dr. SCHEELE. In some of these cases we have not eradicated them forever, so to speak. In other words, if we slow down our approach in our areas that would potentially breed mosquitoes, for instance, our use of DDT and that sort of thing, we might find these things coming back.

We also have another problem which worries us a great deal.

We have discovered that the housefly tends to become rather immune to DDT. At least, something is happening there in some instances and it can happen that an area not affected today can be affected later.

So we necessarily cannot be complacent and say that DDT is the answer to all of our problems and we can rest on our laurels now and stop. We have to keep looking for betterments; keep studying problems.

Mr. FOGARTY. Then there are sometimes some side effects that develop from some of these new things such as DDT; is that not so?

Dr. SCHEELE. Sometimes we start using these things and we have no tangible evidence of their harmful effects and we later awaken to the fact that we have been having some very slow effects from things we have been using. In that case one might ask why we ever started using it. Unfortunately, when one discovers a thing as wonderful as DDT, unless it is openly bad, we just cannot afford not to use it since it becomes such a vital thing in our farming and agricultural program and in control of these diseases. You just have to use it and find safeguards and improvements.

Mr. BUSBEY. A good illustration of that, Doctor, would be, I think, in your research on arthritis, would it not? When they first brought out this ACTH we only found out through experience that originally they had been giving it in too large a dose and cutting down the dose resulted in more effective treatment.

Dr. SCHEELE. Yes, sir. We still are not really sure as to what the long-range effects of even that low a dosage will finally be.

Mr. FOGARTY. If there is nothing further for the record, the committee will be in recess until tomorrow morning.

THURSDAY, FEBRUARY 22, 1951.

VENEREAL DISEASES

WITNESSES

DR. T. J. BAUER, CHIEF, DIVISION OF VENEREAL DISEASES
A. ELLIOTT THOMPSON, BUDGET AND FISCAL OFFICER, BUREAU OF STATE SERVICES
DR. LEONARD A. SCHEELE, SURGEON GENERAL
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

VENEREAL DISEASES

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
Appropriation or estimate	$16,000,000	$14,500,000	$11,800,000
Transferred to—			
"Control of tuberculosis, Public Health Service" pursuant to Public Law 583	−42,000		
"Assistance to States, general, Public Health Service" pursuant to Public Law 583	−117,000		
"Control of communicable diseases, Public Health Service" pursuant to Public Law 583	−188,000		
Adjusted appropriation or estimate	15,653,000	14,500,000	11,800,000
Unobligated balance, estimated savings	−35,928		
Savings under sec. 1214		1,636,500	
Obligations incurred	15,617,072	12,863,500	11,800,000
Comparative transfer to—			
"Salaries, Office of Administrator, Federal Security Agency"	−64,986		
"Salaries and expenses, division of service operations, Federal Security Agency"	−14,505		
Total direct obligations	15,537,581	12,863,500	11,800,000
REIMBURSABLE OBLIGATIONS			
Reimbursements for services performed	31,654	32,000	32,000
Total obligations	15,569,235	12,895,500	11,832,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
1. Grants to States for general venereal disease control, case finding, and treatment	$13,366,773	$10,705,600	$9,625,000
2. Direct operations:			
(a) Clinical and laboratory research	551,419	352,020	354,000
(b) Technical assistance to States	1,344,928	1,529,960	1,545,000
(c) Administration	274,461	275,920	276,000
Total direct obligations	15,537,581	12,863,500	11,800,000
REIMBURSABLE OBLIGATIONS			
2. Direct operations: (b) Technical assistance to States	31,654	32,000	32,000
Total obligations	15,569,235	12,895,500	11,832,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	723	760	720
Full-time equivalent of all other positions	18	27	28
Average number of all employees	679	742	713
Personal service obligations:			
Permanent positions	$2,694,536	$2,920,433	$2,829,423
Part-time and temporary positions	82,164	105,765	110,961
Regular pay in excess of 52-week base	7,627		9,673
Payment above basic rates	13,688	11,539	11,240
Total personal service obligations	2,788,015	3,037,737	2,961,297
Deduct charges for quarters and subsistence	6,067	5,019	4,500
Net personal service obligations	2,781,948	3,032,718	2,956,797
DIRECT OBLIGATIONS			
01 Personal services	2,758,824	3,008,718	2,932,797
02 Travel	168,113	168,876	146,857
03 Transportation of things	42,364	26,550	26,050
04 Communication services	15,573	14,600	14,600
05 Rents and utility services	23,658	23,650	22,650
06 Printing and reproduction	55,579	52,900	52,900
07 Other contractual services	66,785	67,706	66,706
08 Supplies and materials	567,805	444,125	418,881
09 Equipment	160,530	111,150	104,150
11 Grants, subsidies, and contributions	11,678,350	8,939,967	8,002,978
15 Taxes and assessments		5,258	11,431
Total direct obligations	15,537,581	12,863,500	11,800,000
REIMBURSABLE OBLIGATIONS			
01 Personal services	23,124	24,000	24,000
05 Rents and utility services	7,805	7,000	7,000
08 Supplies and materials	725	1,000	1,000
Total reimbursable obligations	31,654	32,000	32,000
Total obligations	15,569,235	12,895,500	11,832,000

Mr. FOGARTY. The committee has before it this morning, Dr. Bauer who will justify the appropriation, "Control of Venereal Diseases." Doctor, do you want to make a statement to the committee?

GENERAL STATEMENT

Dr. BAUER. I have a brief statement, sir.

Mr. Chairman and members of the committee, venereal disease is a menace to the defense program. Uncontrolled it destroys the moral of the civilian as well as the military population. It delays induction and urgent military operations. It slows down industrial production, and the late complications of syphilis absorb tax dollars.

VENEREAL DISEASES RISE IN TIMES OF MOBILIZATION

In the past, venereal disease rates have risen in times of mobilization. This need not happen during the present crisis. The Venereal Disease Division will do everything in its power to assure that it does not happen. In order to assure this, State and local health departments must continue to have resources adequate to maintain basic operation services such as laboratory, and diagnostic and treatment clinics. This is necessary because last year 231,000 persons were reported as having syphilis. Another 300,000 people were reported as having gonorrhea. During the same period of time, 11,000 deaths occurred due to syphilis; 5,000 people were admitted to mental institutions for the insane due to syphilis.

The States spent—of State-appropriated moneys—in excess of $11,000,000 for the care of the syphilitic insane in mental institutions. Now, for the past 1½ years, the Veneral Disease Division has been working with Selective Service and the military, setting up machinery to alert the local health departments as to where the infections come from. As a result of this work, there is now a uniform method of reporting venereal disease between the Armed Forces, the Public Health Service, and the State and local health departments. It must be remembered that the sailor and soldier does not get his venereal disease from the military but gets his disease from the civilian population in the immediate and recreational area. Recognizing this, the State and local health departments have arranged with the Armed Forces, insofar as funds permit, to place teams of venereal disease investigators and interviewers in areas where the need is the greatest in order to prevent the occurrence of organized and unorganized foci of infection. This shift of health workers does not represent a shift in the basic civilian venereal disease control program. It merely represents a shift in personnel to meet a problem caused by new concentrations of young people. So long as these concentrations of people remain, the problem will remain. When these people return to other environments, it will be necessary to move the venereal disease control program to these other environments.

ADDITIONAL WORK OF STATE HEALTH DEPARTMENT LABORATORIES

The standard serologic test for syphilis has been made a part of the induction examination of inductees into the Armed Forces. This worth-while procedure has placed an added burden on the shoulders

of the State and local health-department laboratories. During the first quarter of this fiscal year, there were one-half million more blood tests performed for syphilis in the State health-department laboratories than were performed in the preceding year for the same period of time. State laboratories have met this demand with considerable difficulty. Added support will be necessary to these laboratories if the load gets greater.

CONTROL OF VENEREAL DISEASE

Briefly, and in summary, the real fight started in 1938 when Congress first appropriated special funds for venereal-disease control. From that time until the present, there has been a gradual decline in the incidence of syphilis from 259,000 per year to 98,000 per year. This shows that syphilis can be controlled. However, it can be controlled only with sustained effort. To use a military analogy, we can go on with our efforts and defeat the enemy, syphilis, or we can relax and permit the enemy forces to regroup. It is much less costly in lives and money to proceed with an all-out effort against syphilis to eradicate it than to live with it in increasing numbers in the years to come.

It is my considered judgment that the State health departments are determined to control venereal disease. The Venereal Disease Division is determined to help them in every way possible. Their policy and ours will be to intensify case finding and treatment in high-prevalence areas, and to shift to new-problem areas insofar as funds permit.

FUNDS AVAILABLE, 1951 AND 1952

Mr. FOGARTY. Thank you, Dr. Bauer.

You had available, in 1951, $14,500,000 before the final action of the Congress on the over-all appropriation bill had been determined. Under that act, under section 1214, $1,636,500 was withheld, is that correct?

Dr. BAUER. That is correct, sir.

Mr. FOGARTY. Which left you available, in 1951, $12,863,500; and you are asking for this year, $11,800,000, or a decrease of $1,063,500. A decrease in positions from 760 to 720. Where did you apply this budgetary reserve of $1,636,500?

Dr. BAUER. The decreases, due to the budgetary reserve of $1,636,500, was applied in the main to formula grants to the States. There was a $75,000 budgetary reservein direct operations.

Mr. THOMPSON. That $75,000 is also in the grant item, but applies to case-finding projects and not to the formula grants to the States. The decrease in formula grants is $1,561,000.

Mr. FOGARTY. What do you mean by "formula grants"? Are they grants given to States under a certain formula?

Dr. BAUER. Formula grants are grants given under a formula which consists of three portions: that is, financial need, population, and the extent of the problem. The weight is 20 percent to the financial need and population, and 80 percent to the problem.

Mr. FOGARTY. You say, on your grants to States this year, practically all of the decrease that you show in this year's budget will be applied against the grants to the States.

Dr. BAUER. That is correct, sir.

Mr. FOGARTY. You say that the estimates for the formula grant payments to the States have been decreased in 1952 due to the decline, expected decline, in treatment load and to the present shift from in- to out-patient therapy. What do you mean by "out-patient"?

Dr. BAUER. The State health departments have been maintaining rapid-treatment centers in many areas; and, because of a change in the nature of treatment schedules in certain areas, it has been possible to move to out-patient treatment.

Mr. FOGARTY. Is it because of the effectiveness of the rapid-treatment program?

Dr. BAUER. The evaluation has been performed for these therapies mainly in rapid-treatment centers. Now, particularly in northern urban areas, treatment can be given on an out-patient basis.

BREAKDOWN OF GRANT FUNDS

Mr. FOGARTY. Can you give us some table for 1950 and 1951 to show this shift to out-patient treatment?

Dr. BAUER. Yes, sir.

Mr. FOGARTY. You have a table here for the grant obligation by activities which I will ask to be inserted in the record at this point.

(The tables referred to follow:)

Grant obligations by activities

	1950 actual	1951 estimate	1952 estimate	Increase or decrease, 1952 over 1951
1. Veneral-disease formula grant-in-aid	$7,735,000	$5,500,000	$3,525,000	−$1,975,000
2. Grants for special in-patient treatment projects	4,855,400	3,968,900	3,600,000	−368,900
3. Grants for special out-patient treatment, laboratory, and diagnostic-facilities projects	0	31,000	500,000	+469,000
4. Grants for case-finding projects	776,475	1,205,700	2,000,000	+794,300
Total	13,366,875	10,705,600	9,625,000	−1,080,600

	Admissions to rapid-treatment centers	Diagnostic observations in clinics
Fiscal year 1948	181,400	2,328,000
Fiscal year 1949	160,000	2,276,900
Fiscal year 1950	131,700	2,717,700
Fiscal year 1951 (estimate)	107,300	2,858,000
Fiscal year 1952 (estimate)	80,800	3,090,000

USE OF GRANTS

Mr. FOGARTY. Your table shows that there is a decrease of $1,975,000 for formula grant-in-aid. For what are these grants used?

Dr. BAUER. These grants are especially used for the support of basic venereal-disease-control activities within the State, such as support of the venereal-disease-control divisions within the State, laboratory services, diagnostic clinics, particularly as they are associated with the full-time local health departments.

Mr. FOGARTY. You show a decrease of $368,900 for grants for special in-patient treatment projects. What are they?

Dr. BAUER. Special in-patient treatment projects are projects for the support of in-patient therapy in rapid-treatment centers. This decrease of $368,900 is due to a decrease in the estimated number of patients who will be admitted to these rapid-treatment centers.

Mr. FOGARTY. You are asking for an increase of $469,000 for grants for special out-patient treatment. What do you mean by that?

Dr. BAUER. In item 3 of the special table, grants for special out-patient treatment, laboratory, and diagnostic facilities, we have asked for $469,000 increase essentially for two purposes. The first is to supplement existing laboratory facilities in areas where the loads are heavy because of case-finding activities and Selective Service blood testing; and, second, because of the need for moneys to reestablish clinics in certain areas to move from in-patient to out-patient therapy.

Mr. FOGARTY. This is a way of getting around this formula for grants to States on a population basis and need to take care of those federally impacted areas because of the emergency we are in at the present time?

Dr. BAUER. A great deal of thought was given to the formulation of this budget; and, after careful consideration, it was determined that, in order to meet the problems in high-prevalence areas as well as problems where there has been developed new concentrations of young people, because of mobilization, it would be necessary to increase project grants.

That was a big problem in the last war, sir. In fact, syphilis or gonorrhea occurs mainly in the young people; that is, they get the disease in their younger ages. When home ties are broken, and people go away from home, very frequently the disease increases.

ACCOMPLISHMENTS DURING WORLD WAR II

Mr. FOGARTY. What did you accomplish in the last World War in this program? Will you give us a brief summary of what happened?

Dr. BAUER. During the last World War, the Division of Venereal Disease set up trained groups around cantonment areas in order to ferret out the sources of infection, and by this method decreased the numbers of cases of syphilis that would have occurred. During the time when the military personnel were discharged from the service, in very close cooperation with the military, these individuals were screened before they went back into the community and those found infected were treated. By so doing many innocent infections back in the communities were prevented.

Mr. FOGARTY. Did you not also help the local medical authorities in establishing these treatment centers and advise them of new ways of controlling this disease?

Dr. BAUER. The rapid-treatment centers were actually the keystone of the operation during World War II because they gave us not only an opportunity to develop new forms of therapy but also a place to isolate promiscuous indivuals that were acutely infected. In fact, the rapid treatment center in the venereal-disease-control program to a large measure had a great deal to do with our proficient forms of therapy now. It was during this period of time that treatment moved from a long, arduous 18-month treatment down to a treatment of 10 days.

Mr. FOGARTY. I remember 2 or 3 years ago someone testifying to that and that they found that conditions surrounding these camps was never considered much of a problem before these boys went there. They did not have the ways and means of taking care of these people. Is that not correct?

Dr. BAUER. That is correct, sir.

Mr. FOGARTY. I have forgotten who made that statement.

Dr. BAUER. Already the Public Health Service is receiving requests not only from the State health departments but from the military personnel, for trained individuals to work in these areas; and assignments have already been made in several areas.

INCREASE FOR CASE-FINDING PROJECTS

Mr. FOGARTY. You are asking for an increase of $794,300 for "Case-finding projects." That is for grants to States?

Dr. BAUER. Grants to States for case-finding projects which will tie into areas where the need is the greatest and the prevalence is the highest and where there are new concentrations of people.

Mr. FOGARTY. That is one way of prevention, to get these cases and then treat them; is it not? That is a way to prevention.

Dr. BAUER. That is correct, sir.

Mr. FOGARTY. Is that a change in the over-all program, from treatment to case finding?

Dr. BAUER. It is a change in the area of operation—a change to areas of high prevalence rather than attempting to blanket the entire country. I might say it comes down to seeking out and eliminating the pockets of resistance.

RESEARCH WORK

Mr. FOGARTY. This $1,636,500 that was cut from the budgetary reserve, does any portion of that apply to your research projects?

Dr. BAUER. No portion of that was applied to research. The research was cut down to what we think is the bare minimum in 1950. We cut $200,000.

Mr. THOMPSON. Actually on that, Mr. Chairman, the 1950 appropriation provided for $551,419 for clinical and laboratory research and at the suggestion of the committee, and also after analysis of our own programs, moneys were taken from research and put into intensified case finding.

Mr. FOGARTY. You are spending this year $354,000 in research this coming year; is that right?

Mr. THOMPSON. Yes, sir; that is right.

Mr. FOGARTY. Have you made any advances in this research project during the past year?

Dr. BAUER. There have been two important advances made in research during the past year. First, a new test known as the treponema immobilizing test for syphilis has been developed. This was developed by Nelson and Turner.

Mr. FOGARTY. Who are they?

Dr. BAUER. They are at Johns Hopkins. But both laboratories of the Division are working a great deal on this particular test because it does supply a need of specificity. In other words, it has a potential

of being a much more specific test than the standard serologic test for syphilis as used. This is most necessary because of the fact that bizarre diseases that come back into this country from the South Pacific very frequently give false positive tests for syphilis, and, of course, this is a very depressing thing for the individual.

Mr. FOGARTY. What is the story? What is the other one?

Dr. BAUER. The other advancement has been that we have learned a great deal more about the spirochete and we are now able to keep the spirochete alive in laboratories.

Mr. FOGARTY. What do you mean by that?

Dr. BAUER. Originally, one of the great disadvantages in research in syphilis was that the organism causing syphilis, the spirochete, could not be kept alive outside of the human being or a laboratory animal. Now we are able, that is, the research workers are able, to keep this spirochete alive in artificial culture media for a period of up to 82 days. That gives much more material to use in the work on the immunity of syphilis.

Mr. FOGARTY. Where was this advance discovered?

Dr. BAUER. This advance was made almost simultaneously by two or three different investigators. I think credit goes to Dr. Charles Carpenter who is now at the University of California in Los Angeles who has worked very closely for years with the Division of Venereal Disease.

GRANTS TO STATES

Mr. HEDRICK. Doctor, I suppose you are familiar with the recent outbreak of venereal disease from the presence of prostitutes at Camp Sherman?

Dr. BAUER. I must admit, Congressman, that I have not heard of it. But I will be very glad to look into it immediately.

Mr. HEDRICK. They have had a recent difficulty down there in Georgia. I was sure that your department had been notified. Have you heard anything about it, Dr. Scheele?

Dr. SCHEELE. No, sir; I have not.

Mr. HEDRICK. I notice here your allocations to States seems as though the Southern States are getting the benefit of the doubt here mostly in larger grants. How can you explain that?

Dr. BAUER. An increase of grants to the Southern States is due to a greater need because of the fact that they have a higher prevalence of syphilis than many of the Northern States.

Mr. HEDRICK. For instance, Mississippi, which does not have a large population; it has $217,200. New York States only $253,800.

Dr. BAUER. That is essentially due to two causes: one is that the State of Mississippi has a lower per capita income than the State of New York and, secondly, it is because of its socioeconomic conditions that there is a higher incidence and prevalence rate.

Dr. SCHEELE. May I extend my remarks on Camp Sherman, that situation?

Mr. HEDRICK. Are you familiar with it?

Dr SCHEELE. While no direct information on a specific problem at Camp Sherman has come to my attention, there is another facet of the problem that the Bureau has, the health official of the State of Georgia, and some of the medical folks in the Department of Defense have expressed some concern over the fact that it is the mobilization

of troops into camp areas with the prospects of the kind of thing described at Camp Sherman happening. We are cutting this program back when in some areas like the Camp Sherman, it ought to be intensified at this time even though we have the disease pretty much on the run due to our schools in diagnosis and treatment. It shows what happens in terms of the boys out on leave and the potentials for prostitutes to develop new business is always with us. Even our good results in treatment do not resolve all problems. The State Health Department of Georgia has made a considerable protest on this reduction at this moment of probably increased need for attacking the problem.

Mr. HEDRICK. Mr. Chairman, I would like to have this list put in the record, of the various States——

Mr. FOGARTY. Page 5 will be inserted in the record at this point.

(The list referred to is as follows:)

Allocation of grant-in-aid funds for venereal-disease control, fiscal year 1951

State or Territory	Allocation	State or Territory	Allocation
Alabama	$200,600	New Jersey	$98,600
Arizona	49,600	New Mexico	42,900
Arkansas	121,000	New York	253,800
California	205,100	North Carolina	239,300
Colorado	37,800	North Dakota	19,600
Connecticut	29,100	Ohio	178,500
Delaware	18,800	Oklahoma	109,100
District of Columbia	79,300	Oregon	40,300
Florida	204,700	Pennsylvania	212,500
Georgia	313,000	Rhode Island	17,700
Idaho	22,100	South Carolina	144,800
Illinois	307,400	South Dakota	20,500
Indiana	99,400	Tennessee	158,700
Iowa	50,000	Texas	415,800
Kansas	46,000	Utah	21,800
Kentucky	171,600	Vermont	14,600
Louisiana	199,000	Virginia	143,300
Maine	27,400	Washington	43,100
Maryland	142,900	West Virginia	93,600
Massachusetts	57,000	Wisconsin	45,000
Michigan	124,700	Wyoming	16,900
Minnesota	49,000	Alaska	16,400
Mississippi	217,200	Hawaii	19,600
Missouri	116,700	Puerto Rico	155,000
Montana	17,900	Virgin Islands	11,400
Nebraska	29,400		
Nevada	15,200	Total	[1] 5,500,000
New Hampshire	15,300		

[1] In addition, $5,205,600 is available for project grants.

RESTORATION OF PART OF SECTION 1214 RESERVE

Mr. STEPHENS. I have one item, if you are willing, I would like to put in for the committee's information here because of the apparently alarming situation around some of the newer reactivated camps, the Army got considerably worried about the venereal-disease problem, and this $1,636,500 that is in section 1214 reserve was originally $315,000 more than that but because of the pressure of the armed services on the Public Health Service, we went to the Budget and actually got $315,000 of that money restored to the active program this year. They found it someplace else but that was originally $315,000 greater. The Army pressure resulted in a restudy by the Budget and a reduction of $315,000 in that reserve.

RAPID-TREATMENT PROGRAM

Mr. HEDRICK. There has not been any cut in your rapid-treatment program, has there?

Dr. BAUER. There has been a decrease in the rapid-treatment-center program due to the decreased number of patients being admitted.

Mr. HEDRICK. It is not being discontinued, this kind of program—this kind of treatment?

Dr. BAUER. It is not and cannot be, particularly in many of the southern areas.

Mr. HEDRICK. That should go in the record. But you say that venereal disease is on the decline in practically all the States except the Southern States?

Dr. BAUER. It is on the decline in many of the Southern States.

Mr. HEDRICK. Is it on an increase in any of the Southern States?

Dr. BAUER. At the present moment, I know of no increase in venereal-disease incidence, using syphilis as a measure, in the Southern States.

METHODS OF TREATMENT

Mr. HEDRICK. How do you explain this decrease? Is it through prophylaxis or people being better educated on proper treatment themselves? Would you say that is it?

Dr. BAUER. This decrease in the incidence of syphilis, in my opinion, is due to better case-finding methods, better treatment methods, and straightforward information to the public, and the fourth is that an extensive use of penicillin has been made.

Mr. HEDRICK. In acute cases of syphilis, are you familiar with just how much penicillin it takes to cure them? What treatment is recommended?

Dr. BAUER. There are several, or at least four or five good methods of treatment for early syphilis. It is necessary to keep penicillin in the blood stream of an individual for a period of 10 days to get the most effective treatment; 600,000 units of procaine penicillin in aqueous solution given daily for 10 days is a good form of therapy, or 600,000 units of procaine penicillin of 2 percent aluminum monostearate given every other day is good treatment, the total amount being in the latter form of therapy 3,600,000 units of penicillin.

Mr. HEDRICK. After 10 days, what is the other treatment, continuous treatment, if any?

Dr. BAUER. At the present time the National Research Council and the Division of Venereal Disease do not recommend any additional treatment, but they recommend frequent observations of the patient in order to determine his progress.

Mr. HEDRICK. Frequent blood tests?

Dr. BAUER. Frequent blood tests and frequent physical examinations over a period of years, decreasing the frequency as time goes on.

Mr. HEDRICK. What effect does penicillin have in tertiary chronic form of syphillis?

Dr. BAUER. The National Research Council and the Division of Venereal Disease now recommend the use of penicillin exclusively in

all forms or in all complications of syphillis, with two exceptions: Fever should be included in the treatment of optic atrophy and for the central nervous system where there are manifest symptoms, such as paresis. Dosages should be greater in late complications than in early syphillis.

Mr. HEDRICK. Do they actually get improvement in these cases with penicillin?

Dr. BAUER. In the central-nervous-system syphilis there is in excess of 60 percent improvement in cases given penicillin alone. Usually penicillin must be given for 15 days and the total dosage increased to 9.6 million units or 12 million units of penicillin.

Mr. HEDRICK. In case of locomotor ataxia where the spinal cord has actually been injured, it would not help, would it?

Dr. BAUER. You cannot restore the central-nervous-system tissue, of course, and therefore you may alleviate some of the symptoms but you never cure the patient.

Mr. SCHWABE. Do you arrest the process?

Dr. BAUER. You can arrest the process; that is correct.

Mr. HEDRICK. How about gonorrhea? What action does penicillin have on acute gonorrhea?

Dr. BAUER. The use of penicillin in gonorrhea is one of the most efficient forms of therapy we have in medical practice. The use of 300,000 units is generally recommended, and you can anticipate in excess of 90 percent cure. Recently, we have been using 600,000 units of penicillin in the treatment of gonorrhea in order to abort any syphilis that might have been acquired at the same time.

Mr. HEDRICK. Off the record for just a moment, please.

(Discussion off the record.)

CONNECTION BETWEEN PUBLIC HEALTH AND LOCAL VENEREAL-DISEASE CLINICS

Mr. DENTON. Down in my home town we have a venereal-disease clinic. Is the man who operates that paid by the State through funds in part from the Government, that the Government gives the State, or is her employed by the State alone?

Dr. BAUER. He may be employed either by the State from State revenue funds or from grants-in-aid funds appropriated by the Congress and allocated to the State.

Mr. DENTON. Now, what connection does the Public Health Service have with a clinic like that? Do they supervise them in any way?

Dr. BAUER. There is no direct connection with such a clinic by the United States Public Health Service. Very frequently we are asked by the State health officer to come in for consultation. We have men scattered throughout the United States that are proficient in the treatment of syphilis for this purpose.

Mr. DENTON. Are all these new methods of treating syphilis and gonorrhea made available to that kind of clinic?

Dr. BAUER. The use of the new methods, that is, the pencillin method, throughout the country are universal. Only on rare occasions do you find old methods used. This is the result of, or should I say, this is due to the fact that most State health departments have excellent methods for dissemination of information to the various local health departments; and the United States Public Health Service,

Division of Venereal Disease, maintains active programs to disseminate information not only to the health departments but to the Medical Society on request.

RELATIONS WITH THE DEFENSE AGENCY

Mr. DENTON. Around these camps, do the defense agencies assist you any in finding veneral disease, and to what extent?

Dr. BAUER. Our relationships with the defense agency are very good and very frequent. In fact, each of the component units, the Army, Navy, and Air Force, have venereal-disease-control officers and our information is interchangeable; so much so that the Navy and the Army have asked that the State health departments ask the Public Health Service for aid, and this aid is in the form of venereal-disease interviewers and investigators. They go right into the camps and get the information as to where the probable source of infection is and then ferret out these cases, and see that they get treatment.

Mr. DENTON. The Army interviews them and finds a possible source of infection and then either you or the local authorities take over?

Dr. BAUER. The local authorities do, not the Public Health Service. However, the Public Health Service has individuals especially trained on loan to the State health department and the local health departments.

Mr. DENTON. What do you do if the State agencies do not cooperate in that respect or do you have indications of that kind?

Dr. BAUER. The venereal-disease-control program has been very fortunate in that it has had no such incident.

Mr. DENTON. Do you have good cooperation?

Dr. BAUER. Excellent cooperation.

Mr. DENTON. I think that is all.

CARE OF CHARITY CASES

Mr. HEDRICK. Does the United States Public Health Service furnish the penicillin to be used free in charity cases?

Dr. BAUER. The State health departments furnish penicillin free to clinics either from State-appropriated funds or from funds granted to the States by the Public Health Service.

Mr. HEDRICK. They do not furnish these arsenical preparations any more that were used generally?

Dr. BAUER. Almost without exception arsenicals are no longer furnished. The Venereal Disease Division does not recommend the use of the arsenicals or bismuth at this time.

Mr. HEDRICK. Or mercury?

Dr. BAUER. Or mercury.

Mr. SCHWABE. The former methods of treatment have been practically abandoned now since penicillin has come into the picture?

Dr. BAUER. Almost exclusively, sir.

Mr. SCHWABE. Is that true by private practitioners as well?

Dr. BAUER. The private practitioner has been just as alert as the Health Department has in this particular.

Mr. SCHWABE. Has he kept pace very well?

Dr. BAUER. Excellently, I would say.

TREATMENT OF ADVANCED SYPHILIS

Mr. SCHWABE. Has the therapy or treatment involving the injection of live malaria bacteria followed by specific quinine been abandoned also in the cases of syphilis that have advanced to stages of paresis or general paralysis or locomotor ataxia as formerly, has that been superseded by penicillin treatment?

Dr. BAUER. There are two schools of thought as to the treatment of late complications of the brain due to syphilis. One believes that malaria should be used with penicillin and the other school believes that penicillin should be used alone. Therefore, there has been developed a study committee by several medical schools in cooperation with the Division of Venereal Disease to study this particular problem.

Mr. SCHWABE. Those arguments have not yet been resolved?

Dr. BAUER. The arguments as related to late complications of syphilis have not been resolved. There is need for many years of follow-up on patients treated for syphilis with penicillin because, as we know, syphilis is a disease that is known for its chronicity, for its latency, and for developing symptoms 10 to 20 years after the original infection.

Mr. SCHWABE. So far, penicillin especially in these rapid treatment centers is so new and your experience is so brief you cannot yet say what the future holds in store for you?

Dr. BAUER. As it relates to complications, that is correct, sir.

Mr. HEDRICK. It used to be quite a problem to find the spiorchete and you would have to use a dark field and all that. Has there been any improvement in finding the spirochete?

Dr. BAUER. The dark field microscope is till used but methods of collecting the specimen have improved.

Mr. HEDRICK. It used to be like sort of looking for a needle in the haystack. You could not swear that it was there or that it was not.

Dr. BAUER. Dark field examination for the spirochete is still quite a technical procedure and needs a well-trained individual to perform it.

APPLICATION OF BUDGETARY RESERVE

Mr. FOGARTY. Doctor, one more question. Will you supply for the record a breakdown of the cuts in program under that budgetary reserve of $1,636,500?

Dr. BAUER. Do I understand the question to be you would like to know where the——

Mr. FOGARTY. Cuts were applied and what parts of the program, the grants to States and the other part of the program are affected by that cut?

Dr. BAUER. I would be very happy to.

Mr. SCHWABE. That is with reference to the anticipated reduction?

Mr. FOGARTY. No, Mr. Schwabe. I was talking about that $1,636,500 that the Budget held in reserve which they took from our original appropriation a year ago.

Mr. SCHWABE. It is applicable also to the anticipated reduction?

Mr. FOGARTY. Yes. Dr. Bauer, on the other reduction that you show over 1951 of $1,030,000, will you give us the detailed breakdown?

Dr. BAUER. By States?

Mr. SCHWABE. Anticipated 1952 fiscal.

Mr. FOGARTY. 1952.

Dr. BAUER. If I understand it correctly, you want a detailed breakdown of the $1,636,500 with a statement as to how it affected the program.

Mr. FOGARTY. That is right. And the $1,000,000 cut you have in 1952.

(The information requested is as follows:)

EFFECT OF BUDGET RESERVE UPON VENEREAL-DISEASE PROGRAM, 1951

States were notified April 3, 1950, that the total amount recommended by the House Appropriations Committee for grants-in-aid was $7,735,000. Subsequently, on June 30, States were notified through the regional offices that they should base their budgets on the amount contained in the President's budget ($6,835,000) or the amount recommended by the House committee, whichever was the least. They were not notified until October 13, 1950, of the final allotment, which, after deduction of the Bureau of the Budget reserve (sec. 1214) was $5,500,000. In the meantime, they had been forced to proceed on the basis of the only information at hand (the amount contained in the President's budget). Consequently, when they finally were notified, their commitments were considerably in excess of the funds available.

As a result of the $1,636,500 cut made by the Bureau of the Budget under section 1214 of the 1951 Appropriation Act, States were forced to curtail essential services of personnel in laboratories, clinics, and case-finding activities, the need for which has been intensified due to both military and industrial mobilization. Venereal diseases in areas of mobilization have in the past presented problems which required intensified effort by Federal, State, and local governments.

Any slackening of these efforts may put us years behind the gains already made. Reduced appropriations for disease-control activities can prove disastrous. This is particularly true of those diseases which have the effect of reducing the manpower potential of the Nation. Control efforts are especially important in times when manpower is one of our most-needed resources and every effort will be made within available funds to meet the situations as they confront us.

Breakdown of cuts, by State, as result of budgetary reserve (sec. 1214) and additional reduction in 1952

State	Net cut due to budgetary reserve	Additional reduction in 1952 estimate	State	Net cut due to budgetary reserve	Additional reduction in 1952 estimate
Total	1,636,500	1,080,600	Nevada	3,700	5,700
			New Hampshire	4,600	4,500
Alabama	40,900	35,400	New Jersey	34,100	20,800
Arizona	16,000	11,900	New Mexico	4,000	9,700
Arkansas	60,600	25,700	New York	103,300	65,900
California	79,900	46,800	North Carolina	48,700	35,000
Colorado	11,000	9,300	North Dakota	5,600	5,900
Connecticut	10,400	6,900	Ohio	49,900	44,100
Delaware	5,700	6,100	Oklahoma	26,500	17,000
District of Columbia	29,500	13,700	Oregon	14,100	9,100
Florida	56,800	45,500	Pennsylvania	84,300	42,200
Georgia	70,700	43,400	Rhode Island	5,500	5,600
Idaho	6,600	6,200	South Carolina	35,300	29,800
Illinois	71,900	43,600	South Dakota	6,000	6,300
Indiana	38,600	20,100	Tennessee	62,300	29,300
Iowa	18,600	10,400	Texas	116,300	72,400
Kansas	16,700	12,300	Utah	6,500	6,300
Kentucky	30,300	23,800	Vermont	4,000	5,000
Louisiana	24,800	34,600	Virginia	56,700	27,100
Maine	9,300	6,700	Washington	15,600	8,800
Maryland	40,900	21,800	West Virginia	19,500	16,600
Massachusetts	29,200	10,500	Wisconsin	16,800	9,800
Michigan	55,600	28,400	Wyoming	4,300	5,700
Minnesota	18,000	9,100	Alaska	4,200	5,400
Mississippi	47,900	37,400	Hawaii	6,200	5,800
Missouri	31,300	23,900	Puerto Rico	59,800	34,200
Montana	4,900	6,200	Virgin Islands	2,700	4,200
Nebraska	9,900	8,700			

PURCHASE OF CARS

Mr. FOGARTY. Now, in your language you are asking for the purchase of 20 passenger motor vehicles for replacement only. Was that authority given to you in 1951?

Mr. THOMPSON. Yes, sir; that is the same language that we have in the current appropriation.

Mr. FOGARTY. Did you replace the 20 cars this year?

Mr. THOMPSON. As I recollect, they have or will be replaced before the end of the fiscal year.

Mr. FOGARTY. Thank you, Dr. Bauer.

Dr. BAUER. Thank you very much, sir.

Mr. FOGARTY. Did you have anything further you wished to add to your statement?

Dr. BAUER. No, sir.

TUBERCULOSIS

WITNESSES

DR. ROBERT J. ANDERSON, CHIEF
DR. LEONARD A. SCHEELE, SURGEON GENERAL

TUBERCULOSIS

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$9,550,000	$9,800,000	$9,000,000
Transferred from "Control of venereal diseases, Public Health Service" pursuant to Public Law 583	42,000		
Adjusted appropriation or estimate	9,592,000	9,800,000	9,000,000
Unobligated balance, estimated savings	−8,737		
Savings under sec. 1214		−400,000	
Obligations incurred	9,583,263	9,400,000	9,000,000
Comparative transfer from "Operating expenses, National Institutes of Health, Public Health Service"	90,000		
Comparative transfer to—			
"Salaries, Office of Administrator, Federal Security Agency"	−18,858		
"Salaries and expenses, division of service operations, Federal Security Agency"	−16,950		
Total obligations	9,637,455	9,400,000	9,000,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Grants to States for tuberculosis control activities	$6,781,263	$6,350,000	$6,000,000
2. Direct operations:			
(a) Cooperative applied research	737,398	765,000	725,000
(b) Technical assistance to States	1,876,126	2,010,000	2,005,000
(c) Administration	242,668	275,000	270,000
Total obligations	9,637,455	9,400,000	9,000,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
Total number of permanent positions	549	562	535
Full-time equivalent of all other positions	64	90	90
Average number of all employees	512	579	557
01 Personal services:			
Permanent positions	$1,787,440	$2,055,896	$1,997,724
Part-time and temporary positions	168,373	242,106	242,106
Regular pay in excess of 52-week base	6,023		8,698
Payment above basic rates	12,028	4,444	4,444
Total personal services	1,973,864	2,302,446	2,252,972
02 Travel	369,844	332,942	360,010
03 Transportation of things	14,669	16,836	15,436
04 Communication services	9,930	8,600	8,600
05 Rents and utility services	17,254	20,128	16,456
06 Printing and reproduction	29,246	36,688	36,688
07 Other contractual services	46,859	34,456	34,456
08 Supplies and materials	239,686	202,796	227,763
09 Equipment	132,254	79,760	30,519
11 Grants, subsidies, and contributions	6,803,849	6,363,600	6,013,600
15 Taxes and assessments		1,748	3,500
Total obligations	9,637,455	9,400,000	9,000,000

Mr. FOGARTY. We now have with us the Division of Tuberculosis. Dr. Anderson, do you have a statement?

Dr. ANDERSON. Yes, Mr. Chairman.

Mr. FOGARTY. You may proceed.

GENERAL STATEMENT

Dr. ANDERSON. The control of tuberculosis depends on a favorable balance between man and the tubercle bacillus. In this country with control programs this balance has been favorable to man. However, in other countries in World Wars I and II this balance was greatly disturbed—more cases of tuberculosis developed and there was a tragic rise in tuberculosis deaths. The productive capacity of many people was lost. In Japan, in Europe, in India, millions of dollars are being spent to bring the disease again under control. In the five war years here our control efforts prevented a rise in the tuberculosis death rate, but our progress against the disease slowed down.

EFFECT OF POPULATION MOVEMENTS

Since tuberculosis is spread from one person to another, population movements can affect the spread of the disease. In World War II, we saw cities grow almost overnight. Housing was overcrowded, sanitary facilities inadequate, and health resources were insufficient to cope with a nation on the move. The people on the move brought with them tuberculosis, which was expected and with proper health controls would not be alarming. But, with people in crowded quarters, working long hours, such a situation is dangerous—especially so in the absence of adequate health measures.

Even under normal circumstances tuberculosis takes its bite out of our manpower. The 40,000 Americans who die annually of tuberculosis represent a loss of about a million years of productive life. As in 1944, the demands for manpower from industry today tempt TB patients to interrupt their treatments before they are well.

When patients leave hospitals too soon they relapse and we have more spreaders of the disease. In addition to the direct losses tuberculosis ties up health resources. For every TB patient there is one health worker engaged in his care.

TUBERCULOSIS CONTROL PROGRAMS

What we do today determines where we will be tomorrow. From 1930–40, our TB death rate declined at the rate of 25 percent every 5 years. Using the 1930–40 decline as a base, we find that progress in the war years was only one-half as good; since 1945 it has been almost twice as good as in the base years. Our control resources, personnel, and facilities are much more adequate than they were in 1944 when the Federal program with grants-in-aid to the States began to help the States expand their tuberculosis-control programs. In 1944, only half of our States had tuberculosis divisions; now all State and Territorial health departments have tuberculosis-control programs.

Diagnostic and treatment clinics have almost doubled. Whereas in 1940 few well people had their chests X-rayed, this year we estimate that, with Federal assistance, 16,000,000 people will have their chests X-rayed. More and better laboratory tests are being done. Expanded nursing services give patients and their families instruction about protection of exposed children, or home care for a patient waiting to get into a sanatorium. Case-work services help patients and their families with their social and financial problems. Tuberculosis case inventory systems have been set up which provide information about the location and clinical status of patients so we can give them proper public health supervision. More adequate services have been established for patients who must be hospitalized. With such activities tuberculosis is becoming less and less a threat and less a factor in reducing our available manpower. A few years ago experts said that 40 TB deaths per 100,000 would be an irreducible minimum. Now we have gone below 26.

SCIENTIFIC ADVANCES

We have had brilliant scientific advances in tuberculosis. The patient today can benefit from ingenious surgical procedure for removing or collapsing the lung; streptomycin may be useful in his case. The activities I described bring these advances to more people. Finding and caring for people with tuberculosis is basic to control of the disease. Our case-finding program brings about early diagnosis for patients who usually have had no symptoms nor any other suspicion that they have tuberculosis. Case detection, early in the course of clinical disease, increases patients' chances to benefit from chest surgery and drug therapy.

TECHNICAL ASSISTANCE TO STATES

The PHS provides technical assistance to the States for tuberculosis control. Community-wide case finding and follow-up services are available to large metropolitan areas. Small communities can identify and follow up a large proportion of their unknown cases of tubercu-

losis in a short time. Our service enables the large cities where our tuberculosis problem is more serious to conduct similar intensive community-wide programs. It would be inefficient and uneconomical for large cities to acquire the equipment and personnel needed to find the unknown cases of tuberculosis in a short time. The two 18-unit teams operated by the PHS have enabled more than a dozen cities of more than 100,000 population to conduct such intensive chest X-ray campaigns since 1947. Today we are working in Richmond, Calif., and Phoenix, Ariz. We estimate that our teams will take about 2,000,000 films this year and next year. At the request of the local and State health agencies and medical societies, plans for the program are developed. The operation itself is a joint undertaking with such extensive community participation that up to 90 percent of a city's adult population gets a chest X-ray. The patients found are referred to their physician or clinic for diagnosis and medical management. The PHS teams and personnel which are assigned to the local area aid in planning and conducting the case finding program. In order to insure immediate effective follow-up of the large number of cases discovered by the surveys the PHS assigns professional workers to the local health department.

AID TO STATES

In addition to this assistance to special areas, the PHS helps the States in the conduct of their regular tuberculosis-control programs. We provide intensive consultation and training in medical services, in public health nursing, medical social case work, case register and laboratory services. Particularly are these services necessary when problems in operation develop, when refresher training is needed, when changes occur in specialist personnel and when new program developments are contemplated. We are often asked to come in and give comprehensive review to local control programs and to recommend changes or improvements in specific activities.

IMPROVED METHODS OF CONTROL

We are constantly seeking improved methods of control through cooperative research activities. In tuberculosis, the temptation to clutch at miracle cures is understandable. When streptomycin first came on the market, it was hailed as a panacea for tuberculosis. In cooperation with many doctors and hospitals throughout the country, we undertook an accurate evaluation of its usefulness. We found that streptomycin materially benefits tuberculosis patients and definitely extends their lives. We are now using another new drug, para-aminosalicylic-acid in combination with streptomycin. Early indications are that the combined therapy is more effective than either drug used alone. There are other drugs, meomycin, viomycin, nicin, mycomycin, all antibiotics which in the laboratory seem potentially useful.

We are seeking the mechanism whereby these drugs work on bacteria. Once this is known, it should be possible to eliminate some of the trial and error in our work and narrow the search to groups of drugs which may be effective against the tubercle bacillus.

IMPROVEMENT OF DIAGNOSTIC TECHNIQUES

We are attempting to improve diagnostic techniques for the detection of tuberculosis in its earliest stages. In a study using skin tests and chest X-rays on about 130,000 student nurses, naval recruits, and college freshmen, we have identified another lung condition, histoplasmosis, which can look like tuberculosis on chest X-rays. In mapping the occurrence of this condition, we found that in one large area of the United States, calcification of the lungs is 10 times more likely to be the result of this benign condition than of tuberculosis. From this work, tests are now widely used which differentiate this condition from tuberculosis. This is extremely important to persons who have suspicious finding on chest X-rays, and, of course, to their physicians. We are also at work on a blood test which may help physicians determine which cases of tuberculosis are the most serious, or which may be useful in selecting those individuals who have some relative immunity to the disease.

We are greatly interested in the possibility of preventing tuberculosis through vaccination. One vaccine which has received much attention is BCG, or bacillus Calmette-Guerin, a living tubercle bacillus given to people who are not already infected with tuberculosis—as determined by a skin test. In 1947, we started to vaccinate school children to evaluate BCG. Since that time, we have worked with about 375,000 people, vaccinating 100,000. In order to determine whether the vaccine works—whether it prevents tuberculosis—it is necessary for us to observe all of these people for years after they have been vaccinated.

In our work with BCG, we have learned that different vaccines vary in immediate effect and in duration of effect. Dried products seem inferior to the liquid, although the dry product is stable and liquid BCG is not. We have vaccinated people who have been infected with tubercle bacilli without harm to such individuals. An irradiated vaccine has been developed which is stable, and can be tested before its use to assure uniform potency.

To improve the quality of X-ray work we have conducted performance tests that show which combinations of film and equipment produce the most satisfactory films. We helped develop an electronic system which brightens and intensifies fluoroscopic images so that a doctor can do fluoroscopic work in daylight. We have developed protective measures for technicians and other workers exposed to X-ray hazards.

Through research and direct services we achieve better operations and more uniform program development for all areas, leading to overall program advancement—an aim common to all who seek better tuberculosis control services for all of our people.

DECLINE OF DEATH RATE

Despite the disruption of the last World War our efforts during past years have been attended by a steady reduction in deaths from tuberculosis. During the last 4 years the rate of decline has been accentuated. We are convinced that the continuation of active control measures may be relied upon to add a large and continuing increment to our effective manpower that will repay us in production many

times its cost. Moreover, as in many other communicable diseases, we believe that we may now confidently predict that tuberculosis will be virtually eradicated in the United States within the foreseeable future.

FUNDS AVAILABLE IN 1951 AND 1952

Mr. FOGARTY. Out of $9,800,000, you had withheld from that under the budgetary reserve, section 1214, $400,000, which left you a total of $9,393,540. In this year you are asking for $9,000,000, which shows a decrease of $393,540, and a decrease in positions of 27. This $400,000 that was withheld by the budget, where were those cuts applied?

Dr. ANDERSON. $200,000 in grants in aid to States and $200,000 was in our direct operations.

Mr. FOGARTY. $200,000 in direct operations. How did that affect your operations?

Dr. ANDERSON. We had to take that out of our research activities and out of our technical assistance to States.

Mr. FOGARTY. And the $200,000 grants to States, how did that affect the grants?

Dr. ANDERSON. Some of the States have had to curtail some of their programs as a consequence of that reduction. For example, Michigan had to put up some of its mobile case-finding units because of the fact that the grant-in-aid funds were cut.

Mr. FOGARTY. I should think that would be one of the most important phases of this entire program?

Dr. ANDERSON. Case finding is essential to our control.

Mr. FOGARTY. Now, this $393,540 cut in this year's budget, where will that be applied?

Dr. ANDERSON. Well, $350,000 is applied to grants to the States.

Mr. FOGARTY. That means that the States will have to further curtail their operations?

Dr. ANDERSON. Yes, sir; unless they supplant that money with local money. If they do that, the operations will stay up.

Mr. FOGARTY. What is the rest of it?

Dr. ANDERSON. $36,290 in cooperative applied research, which is for our activities in improving detection methods and evaluating such things as BCG and the irradiated vaccine; technical assistance to the States would be reduced by $2,250 which includes our activities of consultation, and the citywide case finding program, with a reduction of $5,000 in administration.

USE OF GRANT FUNDS BY STATES

Mr. FOGARTY. Briefly, Doctor, tell us how a State uses this money that is given to them in grants?

Dr. ANDERSON. They use this money for the conduct of specific TB control activities such as the case finding program with mass X-ray equipment and personnel to operate it; they also use this money to improve their laboratory services by instituting culture methods of diagnosis for the tubercle bacillus. They use it for establishment of case registers. They also use it for public health nursing services. They use it for the development of medical case work services by social workers to solve some of the emotional and financial problems that a TB patient has when he learns that he has the disease.

Mr. FOGARTY. Was it not this committee that provided the funds three or four years ago for these mass X-ray units throughout the country?

Dr. ANDERSON. Yes, sir.

Mr. FOGARTY. One for every State?

Dr. ANDERSON. No; it was not done on that basis. It was through grants to States; the States in turn bought their units. In addition to that, this committee undertook to develop the idea of the city-wide assistance, the large city assistance rather, through the two 18-unit teams of the Public Health Service.

Mr. FOGARTY. That is up to the States to make these mass X-rays?

Dr. ANDERSON. They do.

Mr. FOGARTY. Do they determine what communities?

Dr. ANDERSON. Yes, sir.

Mr. FOGARTY. How is a small community serviced?

Dr. ANDERSON. Usually by the State health department, with a unit operated out of the State office by the State health department itself. That unit will travel from county to county, conducting community-wide surveys in each county as it goes along, with doctors and nurses coming in to do the follow-up on the cases in those counties, with the assistance of the local physicians.

Mr. FOGARTY. What happens, then, after they have been X-rayed?

Dr. ANDERSON. After the person has been X-rayed, if his film is found negative, he is sent a card telling him that his lungs appear to be okay and advising him that it would be a good idea, if he has symptoms, to go to his doctor anyway and that it would be a good idea to have another chest X-ray in about a year's time. If he has something on his film, a different type of contact is made. He will either be sent a letter informing him that he should see his doctor immediately or that he should come to what we call a retake center where a confirmatory, 14- by 17-inch film would be taken to establish without doubt that the condition did exist. Then the public health nurse in the community will try to make certain that that individual gets into the hands of his doctor or a clinic to determine exactly what his medical status is.

Mr. FOGARTY. In all these cases, these are referred to the person's own doctor or a clinic to determine exactly what his medical status is?

Dr. ANDERSON. That is right.

Mr. FOGARTY. So there is cooperation apparently then with the local medical societies in this type of a program.

Dr. ANDERSON. Almost universally; I would say universally. The local medical societies are one of the sponsoring groups which are responsible for bringing the survey to the community and for determining how the survey shall operate in the local community.

Mr. FOGARTY. Do you find anything else by taking these X-rays?

Dr. ANDERSON. Yes; we also uncover other conditions of the lungs such as bronchiectasis, lung abscesses, some clases of carcinoma of the lung, some other tumors which may be benign; there are some disturbances of the heart that are seen on the chest X-rays and all of these cases are followed through in a similar fashion to the follow-through on the TB cases.

Mr. FOGARTY. So whatever you find, the individual who has been X-rayed is notified regardless of whether it is the TB condition or not.

Dr. ANDERSON. That is right. We feel that we owe that to the person.

FOLLOW-UP PROGRAM

Mr. FOGARTY. Now, how is your follow-up program working out? We gave you some additional money for that work; did we not?

Dr. ANDERSON. Yes; this year was the first year that we had funds for follow-up in the large cities where the Public Health Service teams had operated; and we have just gotten that started with people assigned to the various local health departments. The local health departments have appreciated that service very much. They have requested it of us and the program is under way.

Mr. FOGARTY. That is one of the important phases of controlling this disease—the follow-up program?

Dr. ANDERSON. Yes, sir. One health department may ask for a physician to work in the TB control program; others may ask for a public health nurse because they are short on public health nurses, or another one might ask for a medical social worker to work with the patients.

BED SHORTAGES FOR TB PATIENTS

Mr. FOGARTY. Is there any shortage of beds for TB patients?

Dr. ANDERSON. Yes, sir; there is a shortage of beds. It varies from State to State. The North Central States are better covered with respect to beds than is the rest of the country, with the exception of the Pacific Northwest. But waiting lists are common in most of our States in this country.

Mr. FOGARTY. There are some States that have beds available, though, which because of personnel problems they have not been able to use.

Dr. ANDERSON. There are a few beds that are closed because of inability to find a nurse or a doctor to staff them.

Mr. FOGARTY. Generally, the reason is because of a low scale of wages paid in those institutions in the various States; is it not?

Dr. ANDERSON. Some places do have low wages; that is one factor.

Mr. FOGARTY. That is a factor in my own State, I know.

Dr. ANDERSON. Then another factor is—I know one State where about 100 beds are closed because of the fact that they cannot find personnel; but I think it is understandable why they cannot find personnel. That is because the sanatorium is located so far from any city that the nurses do not want to isolate themselves, as well as the patients.

USE OF STREPTOMYCIN

Mr. FOGARTY. Has streptomycin been considered effective in the treatment of TB?

Dr. ANDERSON. Very definitely.

Mr. FOGARTY. Just certain types of TB?

Dr. ANDERSON. For certain types of cases it is effective.

Mr. FOGARTY. What types of cases?

Dr. ANDERSON. The cases where the lesion is not too long-standing, where there is a constriction in the bronchial passages, respiratory passages; it works well on those cases. It also seems to work well on the tuberculous meningitis, for example, for which we had no therapy before streptomycin. Now we save about half of those cases.

Mr. FOGARTY. When was streptomycin discovered?

Dr. ANDERSON. It was discovered in 1946. It is a relatively new development.

Mr. FOGARTY. How much did it originally cost?

Dr. ANDERSON. It originally cost about $14 a gram. Now it is down to 50 or 60 cents a gram for streptomycin.

Mr. FOGARTY. So the average person is getting to the point where he can afford to have his treatments with streptomycin?

Dr. ANDERSON. Most State sanatoria provide streptomycin as a part of their regular treatment now.

Mr. FOGARTY. What is this other drug you are using with streptomycin?

Dr. ANDERSON. Para-aminosalicylic acid.

Mr. FOGARTY. That is found effective in many cases?

Dr. ANDERSON. Yes; it seems to be best used as a supplement to streptomycin therapy rather than used alone; and the combination of both of them is particularly good for gaining time for the patient. Doctors call it cooling off the disease so they can have chest surgery or other therapeutic measures.

Mr. FOGARTY. One of the advantages of a case-finding program or this mass X-ray program is catching these people in time, getting it in the early stages?

Dr. ANDERSON. Yes, sir.

Mr. FOGARTY. You have had more success with such patients?

Dr. ANDERSON. The treatment is much more effective and it takes a shorter period of time to treat such a patient.

Mr. FOGARTY. Have you any statistics to show the number of people admitted in these institutions in a year that apparently are cured?

Dr. ANDERSON. No, I do not, sir; you mean over-all statistics?

Mr. FOGARTY. Yes.

Dr. ANDERSON. I could give you those for individual sanatoria that we have reports from but I do not have the total figure for the country.

Mr. FOGARTY. Is there such a thing as a mechanical lung?

Dr. ANDERSON. A mechanical lung? Not that I know of.

Mr. FOGARTY. Is there such a thing as transferring a lung from one person to another?

Dr. ANDERSON. No, sir; that has not been done, to my knowledge.

Mr. FOGARTY. Is there any known replacement of the lung?

Dr. ANDERSON. No, sir; the lung once destroyed is permanently destroyed.

(Discussion off the record.)

RESEARCH ACTIVITIES

Mr. FOGARTY. What are you doing at the present time in research?

Dr. ANDERSON. For example, our activities with BCG to evaluate its effectiveness are under way.

Mr. FOGARTY. You have vaccinated some children, you say?

Dr. ANDERSON. We have vaccinated about 100,000 persons, mostly children, with BCG.

Mr. FOGARTY. Have you any evaluation of those vaccines yet on those vaccinated children?

Dr. ANDERSON. No, it is really too early to give final conclusions. (Discussion off the record.)

DEATHS FOR TB

Mr. HEDRICK. I wonder if you would give to the committee for the record how many deaths from the TB there were last year?

Dr. ANDERSON. We do not have the 1950 figures yet, Dr. Hedrick. I can do that for 1949.

Mr. FOGARTY. Will you supply that for the record?

Dr. ANDERSON. I think I have it right here, the exact number. The year 1949 had 39,032 tuberculosis deaths. In 1939, it was 61,609.

Mr. SCHWABE. You show those per hundred thousand; do you not?

Dr. ANDERSON. These are actual.

Mr. SCHWABE. I know the total, but——

Mr. ANDERSON. The figure that I referred to in my statement of 40 per hundred thousand, that is the death rate—40 deaths per hundred thousand of population.

Mr. HEDRICK. Do you have the number of new cases diagnosed in 1949?

Dr. ANDERSON. Yes, sir; I think I have that, too, for the whole United States; it was 133,612. These are cases reported to the State health officers from whom we obtained the information.

Mr. HEDRICK. Does that include the Hawaiian Islands, Alaska, and Puerto Rico?

Dr. ANDERSON. No, sir; just the continental United States.

EFFECT OF SURGERY ON DEATH RATE

Dr. HEDRICK. Do you not feel that the reduction in the death rate of TB is largely due to the surgery nowadays?

Dr. ANDERSON. Because of the interplay of all the factors which serve to reduce the death rate; it is very difficult to ascribe it to any one procedure, but there is no question but what chest surgery and streptomycin therapy have served to reduce the case fatality of TB.

Mr. HEDRICK. In those sanatoria, do they have surgeons available to do surgery on TB; is that right?

Dr. ANDERSON. Practically all sanatoria now have, either within their own staffs or available through arrangements with other institutions, qualified chest surgeons to do such surgery.

Mr. HEDRICK. How frequent is pneumonectomy performed in TB?

Dr. ANDERSON. I think it depends, probably, on the part of the country. Probably it is more frequent in the New England area because of the competence of the surgeons in that area who have worked with that technique.

Mr. FOGARTY. What is that?

Mr. HEDRICK. Removal of one lung.

Dr. ANDERSON. Actual removal of one lung. It is still not a frequent procedure.

Mr. HEDRICK. How do the patients usually convalesce after removal of one lung?

Dr. ANDERSON. Many of them do very well, very nicely; some of their difficulties in breathing, which they have had before the lung was removed, automatically become straightened out with the removal of the lung. That may sound like a paradox to have to take away a man's lung to have him breathe easier, but that is true. The diseased lung apparently distorts the conditions in the chest and actually embarrasses the other lung by its presence.

Mr. SCHWABE. Compensation?

Dr. ANDERSON. Yes.

Mr. HEDRICK. Would it be advisable to remove a lung if the other lung was affected?

Dr. ANDERSON. Ordinarily, it would not be unless you knew that the other lung was well healed. You would not want to remove one lung and leave a man with a diseased lung. But if he had a disease in the other lung and it had healed well and that could be demonstrated, the surgeon might risk it even so, because for some of these cases there is no other treatment than to remove either the diseased lung in its entirety or part of it.

Mr. FOGARTY. You have no record of the number of pneumonectomies performed in the past few years?

Dr. ANDERSON. No, sir; I do not. It would be difficult to accumulate such figures.

Mr. HEDRICK. When I was superintendent of a sanatorium before coming to Congress, I had a rather interesting case. The man weighed about 185 pounds. He was assistant superintendent of one of the big coal companies in my State. He had a child under a year old, I think, a baby. This child became sick, running a temperature. The doctor treated it for several weeks. The child always had this temperature even in the afternoon, especially. He was unable to detect what the trouble was. Finally, he got suspicious that it might be either the father or the mother who might have TB. So he took the father to a specialist and had him examined and he had active TB. In other words, the child was bring impregnated with TB germs enough to give it a temperature. We had an awful time making that man believe he was sick. But we put him in a sanatorium and kept him for awhile and he was begging to go home every day. Every time I went to see him he would say, "There is nothing wrong with me; look at me; I am a big healthy man; I weigh 185 pounds." We had an awful time keeping him as a patient. That just shows how a diagnosis can be made sometimes through the impregnation of one of the children in the family.

Dr. ANDERSON. That is true.

Mr. HEDRICK. Have you had much experience with that type of case?

Dr. ANDERSON. We find in our city-wide survey work where we follow up these cases very thoroughly that about 85 percent of the cases that we uncover have absolutely no symptoms, no reason to suspect disease. We are up against the same thing—the job of convincing them.

Mr. HEDRICK. It is hard to make them believe it, too.

Dr. ANDERSON. They feel perfectly well.

Mr. SCHWABE. Optimism is characteristic there, is it not?

Mr. HEDRICK. Yes; that is right.

Do you think we are making progress in the treatment of TB then, do you not?

Dr. ANDERSON. I think definitely we are making progress in the control and treatment of the disease.

Mr. HEDRICK. Do you think at some point in the future not too many years away that TB might be a very minor disease as far as the human being is concerned?

Dr. ANDERSON. If we can maintain our progress that we have achieved so far, I think we can look forward to that date.

Mr. HEDRICK. That will be a glorious day, will it not?

Dr. ANDERSON. It certainly will.

Mr. SCHWABE. Doctor, with further reference to the removal of the entire lung—and I am not in a position and cannot use all these technical terms, but you understand what I have reference to—originally that was the old Friedrich operation, was it not?

Dr. ANDERSON. I do not remember whose name was attached to it first.

Mr. SCHWABE. And resulted in fatality so frequently that it was not pursued for some years. And where the patient survived the operation, frequently and generally resulted in such a distorted condition of his anatomy, paralysis, perhaps, of the side affected, and so on, that it was not popular until later when Dr. Sauerbach developed a modified Friedrich operation of removing the ribs or framework over the immediately affected area—limited operation, in other words. That is historically the development to a great extent; is that not so?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. I might say that the situation has come very close to me. A brother of mine was one of the early patients to have had an entire posterior half of his ribs removed on one side. The doctor was Leonard Freeman of Denver, in 1920. It is written up in the medical periodicals on this subject. Another operation was performed on a lady, the anterior half of her affected side, by the same surgeon on the same morning. She was from Rensselaer, Ind. Both with pronounced success. But my brother later died of tubercular meningitis in 1935 before we knew of the modern therapy. Then it was considered fatal after a duration of 10 to 12 or 15 days at the most. So I have been close as an observer of the thing, these things, for a layman.

CALCIFICATION OF LUNGS

This matter of calcification of lungs or portion of the lung has been confused in the past, in many instances, by ordinary physicians, with pulmonary TB, has it not?

Dr. ANDERSON. It was formerly thought that all cases of calcification were due to TB.

Mr. SCHWABE. But now we know that a lot of that results from severe attacks of influenza or something of that sort, do we not, and where they become inactive, the calcification is the result.

Dr. ANDERSON. Some cases of pneumonia and other lung conditions will result in calcification, but in our work we find that about 98 per-

cent of all the persons who have calcification in their lung are either positive to a skin test for TB or a skin test for histoplasmosis.

Mr. SCHWABE. Histoplasmosis—is that a progressive disease?

Dr. ANDERSON. Apparently these people get it and never know they have had it.

Mr. SCHWABE. Histoplasmosis?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. They discovered a lot of that during World War II, did they not?

Dr. ANDERSON. Yes, sir.

Mr. SCHWABE. That came home to me, too, about that situation a little bit. But there is no treatment suggested for that when it reaches an inactive stage, is there?

Dr. ANDERSON. No, sir; it is observation, that is all.

Mr. SCHWABE. Over and above a certain developed area it was a disqualification for a man in the service.

Dr. ANDERSON. That is correct.

Mr. SCHWABE. Without their perhaps knowing definitely that it would disqualify him but as a precautionary measure—was that not about the situation?

Dr. ANDERSON. Yes, sir.

QUESTION OF MAXIMUM EFFECTIVENESS OF X-RAY UNITS

Mr. SCHWABE. Now, I have seen these traveling X-ray trucks with their equipment all over the country. On this committee and in the Congress I have been very much interested in seeing your department function to the maximum of its efficiency and develop as far as we can, as far as that is concerned. I think my history and connection with this committee will show that and also in the Congress, and also in the State legislature of my home State. But I have been a little disappointed in observing, and I have made personal observation without their knowing who I was in making the observation, that these trucks will stand on the streets apparently for days at a time with few or no patients, we might say, or people visiting them for examination.

I have wondered if a lot of effort has not been wasted when we should have accelerated the interest necessary to bring people into this truck for examination, and an X-ray of the chest. What are you doing along that line? I have just really seen a lot of wasted time and effort. The fact of the business is that they do not keep them open all day even, and things of that sort. That I think should be scrutinized a little bit for the benefit of the program and the public as well as the taxpayers.

Dr. ANDERSON. I do not know of the situation to which you refer, Mr. Schwabe, but in our own work we work with the local people very carefully and organize the campaign in the city so that we have full support of newspapers, radio, bulletin boards, schools, churches, civic clubs, the professional groups. Therefore, we get a very high response. For example, when we did the Salt Lake City survey, we took in all the Salt Lake City metropolitan area; and the people there tell us that they are quite sure that they got about 93 percent of the adult population over 15 years of age that were in that area.

Mr. SCHWABE. Do you not think you would get a little higher percentage response in an area where they are a little more TB

conscious, out through the great Middle West? I live in Tulsa, Okla., and I have seen what I told about right there on the streets in Tulsa. I have seen it in Oklahoma City and one or two cities outside of my own State. And it has appeared—it has perturbed me a little bit thinking that somebody was lax in not supervising the program to get the maximum benefit out of it. That is what I am trying to get over to you.

Dr. ANDERSON. We are trying very definitely to stimulate the State health departments and the local health departments by our example in the conduct of the large city programs to do similar programs in their smaller cities. You would be interested to know that Tulsa and Oklahoma City both have expressed some interest in having the teams that we have come to their cities to put on this cooperative program.

Mr. SCHWABE. They are interested but at the same time if there was concentrated effort in advance over and above what we have, in engendering the interest that is necessary to get out the people to submit to the examinations within comparatively fewer days, I think we would get more definite results, more people examined, at less expense per person.

Dr. ANDERSON. That is exactly our aim, Mr. Schwabe; and to that end we have health educators, promotional people, and newspaper people working right with us.

Mr. SCHWABE. I hope you augment your services and attitude along that line.

EXPLANATION OF HISTOPLASMOSIS

Mr. DENTON. What is histoplasmosis that was mentioned?

Dr. ANDERSON. That is a fungus infection, sir, which was recognized by the medical profession before, particularly when it caused a type of meningitis which was uniformly fatal and it was very surprising that we should run into this same fungus causing a condition of the lungs which apparently was relatively benign.

Mr. DENTON. Does the fungus growth grow on the lungs, and on the X-ray it looks like TB?

Dr. ANDERSON. Yes, sir. Laboratory tests and skin tests will distinguish histoplasmosis from TB and a sputum test, too, for example, if a patient has a tubercle bacillus.

Mr. DENTON. Does he have difficulty in breathing, for example?

Dr. ANDERSON. He has no symptoms. Very few of them do have symptoms. We have searched for active cases of the disease in the focus of the endemic area, in the center of it, and found only about 15 cases where the histoplasmosis of the lungs was definitely active—where you could possibly get from the sputum of the patient the fungus itself—but it goes into this calcification condition that Mr. Schwabe mentioned, which is indistinguishable from the calcification resulting from TB.

Mr. DENTON. Do you have a scar tissue that has calcium? My father had that.

Mr. SCHWABE. A lot of us.

Mr. HEDRICK. He is talking about separate areas of the United States which have more frequency of this trouble. Where is that?

Dr. ANDERSON. It starts in Kansas and comes up along the Ohio River Valley and as far east here as Maryland. That is where it is most common.

Mr. HEDRICK. Do you find it in Indiana, too?

Dr. ANDERSON. Yes, sir; in Indiana, too.

QUARANTINE LAWS ON TB

Mr. HEDRICK. How many States at the present time have quarantine laws against TB and how effective is it?

Dr. ANDERSON. All of the States have either laws or regulations which would permit them to forcibly isolate a person who has TB. Not very many States do utilize that power. Especially if they have a shortage of beds to take care of the cases—they do not want to force somebody in and deliberately keep out somebody who wants to go—but they all have the power, the basic authority to do it.

Mr. HEDRICK. I know we have that in my State. We sent out two or three patients against their will and set aside in a certain section of one hall for them. One of them broke out all the windows in the room. So we did not find it very satisfactory.

Dr. ANDERSON. Because of that, sir, we have worked with the hospital construction people to encourage the incorporation in a TB sanatorium of a security room of the same type that is used for mentally disturbed patients.

Mr. DENTON. You do not operate hospitals, do you?

Dr. ANDERSON. No, sir.

MAXIMUM UTILIZATION OF X-RAY UNITS

Mr. FOGARTY. Doctor, I just wanted to add my comments to what Mr. Schwabe said. I think he is on the right track. All of us want to see this equipment that is bought with Federal funds utilized to its greatest extent and we want all of the people to be X-rayed with this equipment, all the people possible, and I think that you people should make some check with the State authorities on the utilization of this equipment. I think in some States it may be difficult. But it may be local communities that may be at fault. But I know I went through this X-ray about a year ago. I live in a small country town of about 2,500. But it was arranged on a three-town basis and my sister happens to be head of the district nurses in the three-town area. Much to my amazement, I know they did a lot of work beforehand in sending out cards and the local organizations got together and they claim that 96 percent of the people in that area were X-rayed by this unit. So I do think that if the proper work is done in advance, and the people are notified, that they will respond, because something that is given to them free, and they know by now through the publicity and everything that early detection means a lot to them. But I can see where some States perhaps have fallen down; maybe some of the blame should be on the local communities within the State but I think you people should find out if that exists to any degree and let the States know about it.

Dr. ANDERSON. We will work to that end. We know that there is a great public acceptance of the idea of having your chest X-rayed. It is our job, I think, to let the people know where the units are and

make the units readily available to them so that they will not fail to respond because they would have to drive, say, 5 or 20 miles for a film. We can do that very easily.

Mr. FOGARTY. In this entire public health program, we want this money that we appropriate justified, and we want it spent in the right direction.

RELATIONSHIP BETWEEN PUBLIC HEALTH SERVICE AND BUREAU OF INDIAN AFFAIRS

Mr. SCHWABE. I have another question or two, particularly with reference to certain segments or classes of our citizenship and the incidence of TB among them. I have in mind, for instance, the Indians with whom I have done a lot of work in Congress and elsewhere. We have approximately one-third of all the Indians in the United States residing in the State of Oklahoma, for example. But under better sanitary conditions than you will find in many States and with less incidence, probably, of TB than you will find among the Indians of several other States, but I want to ask you first about the Indians and the Eskimos of Alaska and your activities, if any, toward reducing TB in Alaska.

Dr. ANDERSON. The control programs for the Indians on the reservations and in Alaska are the responsibility, I believe, of the Department of the Interior. We have worked with them in——

Mr. SCHWABE. The Bureau of Indian Affairs in the Department of the Interior.

Dr. ANDERSON. We have worked with them cooperatively to help them put on programs on reservations both here and in Alaska. For example, some of our BCG work has been done on Indian reservations in this country and also in Alaska where we——

Mr. SCHWABE. But more limited than it is among the other segments of our population generally, is that not true?

Dr. ANDERSON. You mean which is more limited?

Mr. SCHWABE. Showing your scope of activities has been more limited and only in conjunction with and when requested to cooperate with the Bureau of Indian Affairs and its medical and health authorities.

Dr. ANDERSON. We have worked with them cooperatively, for example, on this BCG project I mentioned. We supplied the technical people who had the experience in conducting BCG vaccination campaigns and those people we detailed over to the Bureau of Indian Affairs to work cooperatively with them. They covered all the reservations here. In addition, we sent people to Alaska to work with the Territorial department of health and the Bureau of Indian Affairs. But the bulk of the activity was provided there through their staff.

Mr. SCHWABE. All right. Now, this illustration—I do not care to refer to my own State so much, but as an illustration, do you know the place where we have Tallahaney, where we have the State tuberculosis institution, sanatorium, and also across the road from it we have a tuberculosis sanatorium maintained and operated by the Bureau of Indian Affairs. I just wondered—my observation—several hundred miles from my home, my observation and visits there—I thought that perhaps there was not as close a cooperation between the Public

Health Service and the Bureau of Indian Affairs in connection with these tuberculosis institutions. I am trying to elicit information. Maybe I am in error.

Dr. ANDERSON. You mean the local Oklahoma health department which runs the sanatorium?

Mr. SCHWABE. This is a State-run sanatorium and you cooperate nicely with them, I am sure; but I am speaking about the over-all picture between your Public Health Service, United States Public Health Service, and the Health Department of the Bureau of Indian Affairs, we might say. I have in mind particularly right now the tuberculosis institutions.

Dr. SCHEELE. Mr. Chairman, maybe I can speak to that. We have excellent cooperation in Washington between the medical folks over there and ourselves because it just happens that Dr. Fred Foard, a member of the Public Health Service staff, is the chief medical officer of the Office of Indian Affairs. We have staffed the top positions there for many decades, as a matter of fact.

Mr. SCHWABE. That is right. They have operated, and I have been personally up in Alaska so I happen to know.

Dr. SCHEELE. However, there are some problems. It has only been in fairly recent times that the efforts in that medical program for the Indians has been tending in the direction of what would be an ideal approach, in our opinion. I do not propose to speak for the Secretary of the Interior, and the Indian Service. But there is increasing integration of this care with the services of the community around them. Dr. Foard recently made arrangements with the State Health Department of Colorado, which is the first one which is really handling it on a fair scale, so that the benefit of the specialized kinds of public health services, even including the things that can be brought into TB control through State health departments, in Colorado, will move over across the line to the Indian reservation and give the Indians there the same kind of program which the nonreservation population has.

Mr. SCHWABE. Which I do not believe they have had and it has been an acute problem in some other States I know of personally, and I refer to New Mexico and Arizona particularly.

Dr. SCHEELE. So I think it is moving in that direction. There are many obstacles, of course, to its becoming completely effective.

Mr. SCHWABE. I would like to see some of those obstacles removed and I would like to see suggestions made so that this committee if it can may assist, Mr. Chairman, in removing some of those obstacles, and I think sometimes there is a little too much Alphonso play between the two departments of Government here, perhaps.

Dr. SCHEELE. The medical program is not a streamlined program in the sense that the medical people in Washington in the Bureau of Indian Affairs have a great deal of control over the end of the line operation in the medical field. There is a break in the administrative structure so that it does somewhat complicate the bringing about of this coordination.

Mr. SCHWABE. I hope you will suggest that, something that will relieve us a little of that.

TB IN PUERTO RICO

Mr. HEDRICK. I have one other question. I notice here your grant to Puerto Rico is rather large. What is the situation on TB in Puerto Rico?

Dr. ANDERSON. The mortality rate there, Dr. Hedrick, is about 160 per 100,000 compared to our national rate of 26 or under per 100,000.

Mr. HEDRICK. That is not surprising, the way their sanitary conditions are in Puerto Rico.

Mr. FOGARTY. Is it worse in Alaska than it is in Puerto Rico?

Dr. ANDERSON. I do not believe the rate in Puerto Rico is higher than it is in Alaska.

Mr. FOGARTY. I thought that Alasks had the highest rate.

Dr. ANDERSON. The Alaska natives have a very high rate.

Mr. SCHWABE. Climatic differences account for much of it.

Dr. ANDERSON. We do not know, sir, what all the factors are in Puerto Rico that you are referring to.

Mr. SCHWABE. Yes; as compared to Alaska.

Mr. HEDRICK. Mr. Chairman, I would like to have this chart on page 11 put in the record.

ALLOCATION OF GRANT-IN-AID FUNDS

(The chart referred to is as follows:)

Allocation of grant-in-aid funds for tuberculosis control, fiscal year 1951

	Allocation		*Allocation*
Alabama	$145, 900	New Jersey	146, 300
Arizona	55, 600	New Mexico	43, 100
Arkansas	102, 500	New York	464, 300
California	311, 500	North Carolina	200, 800
Colorado	57, 300	North Dakota	48, 200
Connecticut	96, 500	Ohio	274, 700
Delaware	25, 600	Oklahoma	116, 100
District of Columbia	57, 600	Oregon	63, 400
Florida	146, 400	Pennsylvania	288, 000
Georgia	204, 100	Rhode Island	37, 700
Idaho	19, 300	South Carolina	147, 400
Illinois	296, 500	South Dakota	27, 500
Indiana	135, 500	Tennessee	180, 400
Iowa	57, 700	Texas	199, 200
Kansas	85, 200	Utah	23, 400
Kentucky	173, 700	Vermont	21, 900
Louisiana	125, 900	Virginia	198, 200
Maine	33, 000	Washington	87, 500
Maryland	137, 100	West Virginia	92, 100
Massachusetts	225, 900	Wisconsin	112, 000
Michigan	224, 300	Wyoming	12, 700
Minnesota	93, 900	Alaska	87, 100
Mississippi	154, 400	Hawaii	62, 700
Missouri	137, 600	Puerto Rico	203, 900
Montana	24, 000	Virgin Islands	12, 500
Nebraska	42, 300		
Nevada	10, 900	Total	6, 350, 000
New Hampshire	18, 700		

Mr. FOGARTY. Are there any further questions?

If not, thank you for coming.

Do you have anything further you would like to add to your statement?

Dr. ANDERSON. No, sir.

Mr. FOGARTY. Thank you very much.

THURSDAY, FEBRUARY 22, 1951.

ASSISTANCE TO STATES, GENERAL

WITNESSES

DR. J. W. MOUNTIN, ASSOCIATE CHIEF, BUREAU OF STATE SERVICES
A. ELLIOTT THOMPSON, BUDGET AND FISCAL OFFICER, BUREAU OF STATE SERVICES
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

Funds available for obligations

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$16,600,000	$16,915,000	$16,084,000
Transferred from "Control of venereal diseases, Public Health Service" pursuant to Public Law 583	117,000		
Adjusted appropriation or estimate	16,717,000	16,915,000	16,084,000
Unobligated balance, estimated savings	−135,446		
Savings under section 1214		−831,000	
Obligations incurred	16,581,554	16,084,000	16,084,000
Comparative transfer from "Salaries and expenses, Public Health Service"	1,050,700		
Comparative transfer to—			
"Salaries, Office of Administrator, Federal Security Agency"	−44,501		
"Salaries and expenses, division of service operations, Federal Security Agency"	−50,380		
"Engineering, sanitation, and industrial hygiene, Public Health Service"	−950,000		
Total obligations	16,587,373	16,084,000	16,084,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Grants to States for general health	$14,081,128	$13,540,500	$13,540,500
2. Direct operations:			
(a) Technical assistance to States	1,332,521	1,355,412	1,355,000
(b) Collection, analysis, and dissemination of vital statistics	1,018,461	1,022,699	1,023,000
(c) Administration	155,263	165,389	165,500
Total obligations	16,587,373	16,084,000	16,084,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
Total number of permanent positions	509	493	483
Full-time equivalent of all other positions	14	12	12
Average number of all employees	448	447	440
01 Personal services:			
Permanent positions	$1,868,733	$1,955,060	$1,953,016
Part-time and temporary positions	41,357	39,065	39,065
Regular pay in excess of 52-week base	4,890		5,413
Payment above basic rates	3,238	3,500	3,500
Total personal services	1,918,218	1,997,625	2,000,994
02 Travel	162,145	152,775	152,775
03 Transportation of things	14,296	8,286	8,286
04 Communication services	17,611	27,949	27,949
05 Rents and utility services	46,223	57,720	57,720
06 Printing and reproduction	66,132	47,760	47,700
07 Other contractual services	30,787	24,670	21,670
Purchase of vital records transcripts	166,174	168,000	168,000
Services performed by other agencies	364	3,300	2,800
08 Supplies and materials	38,615	42,124	42,124
09 Equipment	45,680	13,020	12,820
11 Grants, subsidies, and contributions	14,081,128	13,540,500	13,540,500
15 Taxes and assessments		331	662
Total obligations	16,587,373	16,084,000	16,084,000

Mr. FOGARTY. Dr. Mountin, do you have a statement for the committee?

GENERAL STATEMENT

Mr. MOUNTIN. Yes, sir.

Mr. Chairman, the item, "Assistance to States, general," is divided into three main sections. One, the funds that are made available to States for several purposes not otherwise provided for under categorical appropriations, which I will detail in a moment; second, the funds that enable the Public Health Service to provide professional and technical assistance to States; and third, the funds for the support, collection, analysis, and dissemination of vital statistics.

USE OF FUNDS BY THE STATES

The funds made available to the States in the form of grants, while carrying the designation "General," are used by the State for a number of purposes, as, for example, 9.7 percent is used for environmental sanitation, 8.5 percent for the support of laboratory, 6.8 percent for industrial hygiene, and so on through a whole array of public-health functions not otherwise provided for in our appropriation structure; that is, in the grant structure.

All in all, 52.9 percent of these funds are used for these special purposes and 38.6 percent is in turn paid out by the State to the localities for the support of the local health organizations.

These local health organizations provide the basic services upon which most of the public health program rests. It is the organization through which the health services are rendered to the community.

I should like to illustrate the kinds of people that are employed and the kinds of work they do. First, I might take the sanitarian. A considerable portion of these grants are used by States and communities to employ sanitarians and sanitary engineers. These are

the men who see that sewage, garbage, industrial waste, are safely disposed of and that communities are not overrun by rats, vermin, and other vectors of disease. They guard the water supply. They look to the purity of the milk supply, food supply. It is largely through the sanitary approach that we have been able to curb such diseases as typhoid fever, malaria, diarrhea, and dysentery; also the remarkable reduction that has been made in diarrhea and enteritis of infants is in great measure due to this improvement of the environment.

The largest group of people that are employed in these local health departments are nurses. These public health nurses see that children are immunized, see that hygienic conditions are maintained in the home, that mothers select proper diet for their children and infants; also nurses work with the school children and the public-health clinics. They assist the family in getting the necessary medical attention through their private physicians and in general they are the health advisers for the entire community; the well-to-do, rich, poor, the ignorant, underprivileged; in other words, the whole community benefits by their services.

This group of workers, that is those employed by local and State health departments, give particular attention to the communicable diseases. In addition to providing the necessary immunization, quarantine, and measures of that type, a group is employed known as epidemiologists, who are skilled in finding out the cause of disease, method of spread. They institute the particular measures that need to be taken to control a specific epidemic.

It is due to the efforts of health organizations that the American people have such a high level of understanding regarding health measures. I think that is one of the outstanding accomplishments of our public-health program. The public generally now has an understanding of the factors that make for health and diseases that has not been achieved by any other people throughout the world. Without the active cooperation on the part of an understanding public, the level of public health we now have in this country could not have been achieved in the first place, and could not be maintained.

Another type of work that is done of a broad general character through these funds is the provision of laboratory services. These laboratories are maintained at the State health department and at the local health department.

We depend upon the laboratory for determining the sanitary quality of the water, the food, the milk, for the detection of specific diseases, and for controlling and evaluating our public-health program generally.

Of course, over and above this organization we have the health officer; that is, the State health officer and his staff, the local health officer. They are physicians, trained in public health and in administrative medicine generally, who work in collaboration with the local hospitals, the local physicians, and the other resources of the community in determining first of all the program that needs to be instituted and then working out ways and means of seeing that it is accomplished.

HEALTH SERVICES FOR DEFENSE

In this connection too I think it would be well to state or to paraphrase some statements that have been made in this bulletin that was presented to you yesterday, Health Services and Special Weapons of

Defense. Throughout that bulletin, as you read it, you will see that so much of the program that has been projected for the detection of unconventional methods of warfare, such as bacterial, and chemical, also a good bit of the program that is designed to meet situations growing out of attack, presupposes, or is contingent upon, I should say, the existence in that community of a framework of organization around which the emergency services can be built, namely, the local health department.

A great deal has been accomplished toward improving the health structure of this country. When this general program was started, back in the 1930's, the total personnel of State health departments, as was reported to us at that time, was 4,672. That number has now grown to 15,000.

STATE FUNDS FOR GENERAL HEALTH PURPOSES

This total staff is not supported entirely, of course, by the general funds that we are now considering. These funds are only a part of the total appropriation that is available. The States and the localities now appropriate $131,166,755, for general health purposes, as contrasted with the $13,540,500 of Federal funds. In other words, ours is about one-tenth that of the total funds that are available for this kind of work; what we speak of as general public health services, and general health organization.

Since this work has been started, a great deal of improvement has been made in the way of coverage. In 1935, 751 counties had health departments. Now 1,734 counties have such organizations.

Now some of these increases in the coverage of county health departments have come about through the formation of local health districts which serve more than one county.

TECHNICAL SERVICES

I shall quickly go on to the next item, which is the technical services that are provided by the Public Health Service. In addition to the grants that are made for the purposes which I have enumerated, the Public Health Service employs technical workers in the various categories of service that I have enumerated, and they are available to the States to help install and to sharpen up the various programs designed to improve the public health services at State and local levels.

In connection with this item we have established a training program. Much of the advance that has occurred in public-health work depends upon bringing into the organization personnel who are well grounded in the fundamentals of public health work and who have practical knowledge on how to apply the principles that have been elicited as the result of our research program. We are now conducting with the States training stations at Amhurst, Buffalo, Pittsburgh, Bloomington, Atlanta, Columbus, Topeka, Denver, and Cincinnti. During the past year, 952 people have passed through these training stations.

Much of this training is geared to the auxiliary worker; that is, the nurse, the inspector, although more of it is designed to give the incoming health officer, and the incoming engineer, practical experience

in carrying out programs as they need to be carried out under field conditions.

The next item that I wish to mention is also in connection with our technical assistance to States. It has to do with studies and demonstrations. As facts are revealed in the laboratory, these need to be taken out into the field and put into application under field conditions. Right now we are concentrating our studies on the chronic ailments. The population is aging, and more and more people are reaching the older age brackets. Most of our program in the past has been directed at the acute communicable diseases which were the principal causes of death and disability in times gone by. Now, as these are being brought under control more and more, we have larger numbers of people reaching the older age brackets. Heretofore, there has been little in the way of a public health program for these older people. We are finding out, however, that chronic diseases, and sickness and disability are not necessarily a part of aging; that the vigor of an individual can be maintained much longer than we had thought.

Persons can lead a productive and satisfying life well into old age, and in fact the people wish to do that. They don't wish to become dependent members of society. They wish to continue to make their contribution.

As a result, we are now developing on an experimental basis, programs of a general character as to diet, hygiene, exercise, and health habits for older people that will enable them to keep up their level of health.

SPECIFIC DISEASE PROBLEMS

We are also directing some attention to specific disease problems. One of them has been diabetes. It is estimated that between 2 and 4 percent of the population are actual or potential diabetics. We have developed a quick method of detecting this condition in the general population; once these people have been found, by getting in touch with their family physician, introducing them to a regimen of life that will enable them to keep their diabetes under control, the complications of diabetes will be eliminated to a great extent, and these people can continue in productive employment and lead quite a satisfactory and satisfying life.

We are also developing on an experimental basis other methods of detecting disease in its incipiency. We have been trying out laboratory tests which will give us the degree of anemia which is so common in order people. We are utilizing X-ray for a number of purposes other than just simply finding tuberculosis. Other chest conditions show up under X-ray. The electrocardiograph is being experimented with to see what we can find out from the normal run of the population.

We are not doing this on any broad scale. We have selected a few places where we can follow these people under clinical conditions. We worked out at Gallinger Hospital a plan whereby the people coming to the dispensary are given a series of these quick simple tests, then they go through the dispensary where they are given the more thorough examination and some of them eventually go into the hospital. In that way we can get an evaluation of these tests. It is done purely on an experimental study basis.

The last point that I would like to mention before going into the specific items that you wish to bring up is regarding vital statistics.

VITAL STATISTICS

The collection and analysis of data pertaining to births and deaths is a regular activity of the Public Health Service. Each child born has his birth recorded in the locality where he is born. Likewise, each person who dies has his death recorded. These birth and death records serve a variety of legal purposes. The births, for example, prove parentage and right to inherit property; they are also used to determine the age for entrance to school, for work permits, and automobile licenses. A great many calculations are made from the data that are collected through birth records, such as the available population for military service and the probable school population.

The deaths likewise have many legal purposes. They are necessary for settling life insurance claims and estates. From a health point of view, they are used to determine the cause of death, and by knowing the causes of death, we are able to project a public-health program that is geared to the needs of the situation.

WEEKLY REPORTS ON COMMUNICABLE DISEASES

As a part of this vital statistics program, an essential one is the collection of the data regarding the occurence of communicable diseases. I wanted to pass copies of this around.

The local practicing physician reports communicable diseases to the local health officer. These, in turn, are transmitted to the States and from the States are transmitted to the Public Health Service. Each week we get a summary of a selected group of communicable diseases and in addition to that we get reported outbreaks of epidemics of one type or another.

I happen to have before me, and have given to each of you a copy of the communicable disease report for the week ending February 10. You will see on the first page the standard list of communicable diseases that are reported regularly. In addition to that, unusual outbreaks of diseases, either by specific cause or even outbreaks of unknown etiology appear on succeeding pages. In that way we know what is going on. The possibility of sabotage or biological warfare being visited upon us is detected immediately. Dr. Andrews yesterday told you of the epidemiological service that we maintain at the Communicable Disease Center. We have there groups of people trained in laboratory diagnosis, field epidemiological technicians, and they are available to investigate these outbreaks if they overtax the resources of the State or local health department, either from the standpoint of diagnosis or control.

That, Mr. Chairman, covers my general remarks, and I presume you wish to bring out others by question.

FUNDS AVAILABLE, 1951 AND 1952

Mr. FOGARTY. Thank you Doctor. Doctor Mountin, you had available in 1951, $16,915,000, and you had withheld from that appropriation by section 1214, $831,000, so you actually had available $16,084,000 for expenditure in this fiscal year?

Dr. MOUNTIN. Yes, sir.
Mr. FOGARTY. You are asking for the same amount?
Dr. MOUNTIN. That is right.
Mr. FOGARTY. A reduction of 10 positions; from 493 to 483.

EFFECT OF SECTION 1214 CUT IN 1951

Where was this $831,000 withheld by the Bureau of the Budget applied in your appropriation, and how did it affect the program?

Dr. MOUNTIN. $659,500 was in the grant program, $159,000 in the special studies and demonstrations, $12,500 in the vital statistics.

Mr. FOGARTY. How did that affect your over-all program?

Dr. MOUNTIN. In the grant progam, it just reduced the funds that we had available for that purpose by that amount and the information we have is that certain health departments that the States had in mind inaugurating just were not brought into being and, in other instances, it was necessary to curtail the services.

In the studies and demonstrations, the principal item there was the nutrition program, which we had to curtail quite drastically, and in the vital statistics, we are limited in the kinds of analysis that we would like to have made of some of the statistics.

NUMBER OF LOCAL HEALTH UNITS

Mr. FOGARTY. How many of these new health units had been planned in 1951 by the various States?

Mr. MOUNTIN. I don't have that information with me, sir.

Mr. FOGARTY. You say you have as of 1950, 1,700-some public health units throughout the country?

Dr. MOUNTIN. That is not quite right; 1,734 counties are served by public health units.

Mr. FOGARTY. About how many people do they serve?

Mr. THOMPSON. They serve 118,638,567.

Mr. FOGARTY. How many counties are without health units at the present time?

Dr. MOUNTIN. I would have to calculate that. There are slightly more than 3,000 counties in the United States and it is the difference.

Mr. STEPHENS. Mr. Chairman, I suggest we supply that because some of these 1,700, as I understand it now involve more than one county.

Dr. MOUNTIN. These are counties included. We have 1,301 health organizations and they include 1,734 counties because some of them are districts that serve more than one county.

Mr. FOGARTY. So there would be 1,296 counties without a public health unit in it at the present time?

Dr. MOUNTIN. Yes approximately, but I think the exact number is 1,336. I might say that the population of many of these counties is small.

Mr. FOGARTY. By and large rural?

Dr. MOUNTIN. By and large they are rural counties. The large city counties would be represented in our figures more than the small rural counties.

I might add, sir, too that while this growth is very encouraging, and we are quite proud of it——

Mr. FOGARTY. In 1935 you had how many health units in how many counties?

Dr. MOUNTIN. We had 751.

Mr. FOGARTY. Counties?

Dr. MOUNTIN. That is right, that had health units.

Mr. FOGARTY. You have grown to 1,734 in 15 years?

Dr. MOUNTIN. 1,734.

Mr. FOGARTY. You gained about 1,000 in 15 years?

Dr. MOUNTIN. That is right. I want to make clear, while this is a very substantial gain in over-all coverage. I don't want to give the impression that these are adequate. As a matter of fact, by using the standards of the American Public Health Association as to staffing we find only 769 meet the minimum standard of one medical officer to 50,000—one health officer per unit, or one additional physician for each 50,000. As for nurses, only 148, and for sanitation personnel, 956 meet the APHA standard, so they are badly understaffed. The coverage is very gratifying geographically, but the staffing is far from what we would like to see it and these are what we consider very minimal staffing, one health officer per unit, or one nurse to 5,000, sanitation personnel, 956 and a clerk for 1,500.

Mr. THOMPSON. That is 25,000 and 15,000.

Dr. MOUNTIN. Excuse me, that is correct.

FUNDS EXPENDED BY THE STATES

Mr. FOGARTY. You have $13,540,500 for grants to the States. How much are the States expending, did you say?

Dr. MOUNTIN. On this particular item?

Mr. FOGARTY. For general health.

Dr. MOUNTIN. General health, State and local, is $131,166,775, as against our $13,540,500.

Mr. FOGARTY. What are the matching requirements by the States for these federal funds?

Dr. MOUNTIN. The matching requirements shall not fall less than $1 to each $2. Now that is minimum. However, as you will see, we are getting practically 10 to 1.

Mr. FOGARTY. In other words the States are spending about $10 for every $1 that is appropriated by this appropriation?

Dr. MOUNTIN. An over-all basis. Of course, it varies from State to State. Alaska, for example, is spending 0.75. That is 75 cents to our dollar.

Mr. FOGARTY. Technical assistance to the States; how many employees are there—there are 266; is that right?

Mr. THOMPSON. Yes, sir.

Mr. FOGARTY. That is where that decrease of 10 positions comes in

Mr. THOMPSON. That is correct.

COLLECTION, ANALYSIS, AND DISSEMINATION OF VITAL STATISTICS

Mr. FOGARTY. Now in the collection, analysis, and dissemination of vital statistics, you are spending this year, $1,023,000. Will you

explain that? I did not quite get the work you were doing in vital statistics. Do you rely on the figures that have been gathered by the census that was taken in the past year in any way?

Dr. MOUNTIN. Yes and no. The census makes an enumeration, a family enumeration, once every 10 years. They make a count of the people in the family. However, continuously in between census enumerations each birth and each death that occurs is recorded locally. Those data are transmitted to the State and in turn to the Federal Government for compilation, analysis, and publication. The data are gathered locally. The certificates are filed locally and in the State, but the analysis and the publication of the data are done centrally. That is, in the office of the Public Health Service, the national office of vital statistics.

Mr. FOGARTY. This publication you have shown us today is part of that work?

Dr. MOUNTIN. That is for communicable diseases.

Mr. FOGARTY. That is part of the vital statistics program?

Dr. MOUNTIN. Yes, sir.

MULTIPHASIC SCREENING PROGRAMS

Mr. FOGARTY. Now in your chronic disease work that you spoke about, doctor, does that mean programs such as this program, this multiphasic screening program that was started at Richmond?

Dr. MOUNTIN. The one that occurred in Richmond was a local program in which we gave some general advice and there were two phases of the program that we participated in actively. One was the TB; that is, the chest X-ray and the other syphilis blood testing. The other part of the program for the most part was carried on by the community. Now those kinds of programs are going on around the country under State and local auspices. We, however, are confining our efforts to the study phase of it.

I mentioned one here at Gallinger Hospital. There is another one going on out at Indianspolis and we have two going on up in Boston.

Mr. FOGARTY. One was started at Boston, was it not, a year ago or a year and a half ago?

Dr. MOUNTIN. That is right.

Mr. FOGARTY. Is that still going?

Dr. MOUNTIN. Yes, sir; the diabetic program. There was one going on in the New England Health Center.

Mr. FOGARTY. Is that the one that was referred to a year ago in the hearings?

Dr. MOUNTIN. I was not here. Probably it was.

Mr. FOGARTY. That was to be a more extensive screening program than the one in Richmond, Va., as I remember.

Dr. MOUNTIN. More intensive. It was done in the Boston dispensary. The people who came in there, had a history taken, a physical examination, and it was a much more intensive study. The numbers covered were not by any means as great as that in Richmond.

Mr. FOGARTY. How long has this program been operating in Richmond now?

Dr. MOUNTIN. It is closed. It has been completed. It has been several months. The material is now being analyzed.

Mr. FOGARTY. What was the purpose of it then, originally?

Dr. MOUNTIN. It was done as sort of a study, for the purpose of finding out—let me go back a bit into the development of this—it has been recognized by the medical profession for a long time that much chronic illness would be discovered if people could be brought in for thorough physical examination and check-up. As a matter of fact, it is routine practice by a number of people now, individually. They go to see their doctor periodically. A number of industries do it with their executives and some of the life-insurance companies have had some of their policyholders come in periodically for a physical examination. That is a long, tedious, expensive job. Some of the health departments, in collaboration with the local medical society such as the one down in Richmond, wanted to see if there was some way in which you could screen out the whole population, those needing more intensive and definitive kind of examination, rather than have everybody examined in this elaborate way which would overtax their financial resources and just overwhelm the local medical profession. We don't have the doctor-time to do that. They carried on the study to see whether you could, by using these simple tests pick out people who should go to their physician for the more elaborate kind of examination that everybody recognizes is that which needs to be done.

Mr. FOGARTY. I guess I had some misunderstanding as to the project. I was under the impression that when we were making these mass X-ray tests for TB, and then when there is a diabetes drive, or a week when they are making tests for diabetes, or syphilis or gonorrhea, that several of those tests could be combined in the one visit and we would save a lot of time and expense and more people could be served.

Dr. MOUNTIN. That is the general philosophy back of it, although it is not quite that simple, because some of these tests are better substantiated than others. The blood test for syphilis, for example, we have been studying that for a quarter century or more. That has now gotten to the point where it is highly reliable, quite simple to perform and inexpensive.

The same is true to a great extent, of the X-ray examination of the chest, whereas there are other tests, such as the electrocardiograph, which is more elaborate; its value on the general population hasn't been determined; likewise, these simple tests for blood sugar haven't been evaluated and we don't have enough experience as to what the finding will be in the general population to say just what they mean yet. A great deal of work needs to be done, and then there are certain other values of doing or using the single approach, because, for example, if you wanted to find syphilis, you would take the relatively young people. There is where you will find active syphilis. If you are looking for diabetes, you will look among the older people, so there is some wastage in bringing everybody in at one time as contrasted with the direct approach when you are looking for a specific illness.

Mr. FOGARTY. But when these mass X-rays are being held for TB, anybody from 15 up are X-rayed, aren't they?

Dr. MOUNTIN. That is right.

Mr. FOGARTY. It is not a question of 50 or over, or between the ages of 15 and 25?

Dr. MOUNTIN. That is right. But I don't believe I answered your question.

Mr. FOGARTY. Well, the point that I thought was made clear to me 2 years ago on this multiphasic experiment program was that they found in that project at Richmond that they could in a short space of time examine many people and as I remember it, they would examine them for about 9 or 10 various things, like hearing, and eyesight, and sugar and chest X-ray, and two or three others.

Mr. THOMPSON. Weight.

Mr. FOGARTY. I thought that was for the benefit of the people in that area.

Dr. MOUNTIN. It is.

Mr. FOGARTY. I did not think it was a pilot program to determine in what classified age that syphilis was more prevalent, or sugar or anything like that.

Dr. MOUNTIN. It was set up as a study to find out how many tests you can bring into the line, what they will cost, and then what you find when you study the general population, and they then follow up on those that had suggested findings, gave them a confirmatory test, and then these patients were sent to their private physicians, or to the clinics as the case may be and the results there were checked against what the simple test shows.

They are now in the process of analyzing those data.

Mr. FOGARTY. They have not analyzed it as yet?

Dr. MOUNTIN. They are in the process.

Mr. FOGARTY. When was that closed?

Dr. MOUNTIN. Along early last summer; I think May or June; something of that order.

Mr. FOGARTY. When do you expect they will be able to determine the benefits of that program?

Dr. MOUNTIN. Rather shortly now. The material is now on punch cards and being analyzed, but I wouldn't want to give you the impression that that is going to answer all the questions for all time, even for such a thing as blood pressure. We haven't yet determined the real, what we call the critical level of blood pressure.

A man walks in and he has 160 systolic pressure. Well now, is that critical or isn't it? A lot of work needs to be done on it because there is quite a range of normal blood pressure. There is a question of excitability of the individual, and then a number of these people have got to be followed some years to see whether or not these early findings were really significant or whether they just represented normal variation.

Mr. FOGARTY. What are you doing at Indianapolis at the present time?

Dr. MOUNTIN. We have a project going on in connection with the colored housing development where we have set up a study which we intend to do this very thing over a period of years. There is a health center there that has been supported partly by endowment and partly by the State and local health department. It is a clinic that has been going on for a number of years.

Mr. FOGARTY. How long?

Dr. MOUNTIN. I couldn't tell you. Eight or ten years, I guess. Maybe longer.

Mr. DENTON. Is that in that colored housing project?

Dr. MOUNTIN. Yes.

Mr. FOGARTY. What work are you doing?

Dr. MOUNTIN. We have put some people in there, a director and one or two statistical clerks, and we are examining these people as they come into the clinic, doing these several tests on them, they are coming back for further examination second and third examinations at subsequent periods. In the course of time we hope to be able to evaluate these various simple tests.

Now that isn't something that is easy to do. You can check it in a measure by contrasting the simple test with the more elaborate one, but also the individual has to be followed over a number of years to see what actually does occur. What you predict might not always occur.

Mr. FOGARTY. What are you doing in Boston? What are they doing? What is this program doing up there?

Dr. MOUNTIN. The program up there? We are featuring diabetes. We are working with the Boston City Hospital, in the diabetic clinic. We are taking the sample of those who do not have diabetes and those that do have. We are working out these tests on them. Then we are working with the local health department on a program of education and training of these diabetics to see what can be done on a mass basis toward controlling the course of diabetes. It is with the Boston City Hospital.

Mr. FOGARTY. I thought they had some similar program like the one in Richmond initiated a year ago.

Dr. MOUNTIN. Excuse me. They did at the Boston dispensary. That is essentially the same sort of thing except that it went on continuously at the Boston dispensary. They have run one of these clinics where they were trying out the simple series tests, a series of simple tests for what we call physical appraisal and these people too are being followed in the clinic with the more elaborate tests, and then they are being followed over time and ultimately we hope to have more precise information than we now have as to what these tests really mean.

Mr. FOGARTY. Do you know of any results of these tests so far in Boston?

Dr. MOUNTIN. Well, we are getting a better understanding of them.

Mr. FOGARTY. Do you know how many people are going through day by day?

Dr. MOUNTIN. I can't answer that. It is not a large number. I was at the clinic and the evening I was there, I don't suppose there was more than 25 went through. They were not looking for large numbers. They were looking for definitive results. It was a study rather than a community service.

Mr. THOMPSON. I think the difference, Mr. Chairman, is that the Richmond survey was an all-out effort to get everyone or as many people in the community as they could into these multiple screening lines and the Boston activity is a continuing program carried on there in the dispensary.

Mr. FOGARTY. I was under the impression a year ago that that one in Richmond was going to be a continuing program and that there was some demand from other cities in the State for that same type of program being transferred to other cities.

Dr. MOUNTIN. This sort of work is going on under the auspices of State and local health departments. I was confining my remarks to the activities in which we, the Public Health Service, were participating.

Mr. FOGARTY. Has the State of Virginia carried on this same type of program that was carried on in Richmond in any other city in Virginia?

Dr. MOUNTIN. I think Alexandria put on one, 2 or 3 months ago. I saw a notice of it in the paper. I think it is entirely possible that some of our people did give them some general advice, but we did not participate in it financially.

EXPLANATION OF A FULL-TIME HEALTH UNIT

Mr. FOGARTY. Dr. Hedrick?

Mr. HEDRICK. Doctor, when you speak of a county having a full-time health unit, what do you mean by that?

Dr. MOUNTIN. It means that they have a health officer and other personnel who are employed on a full-time basis.

Mr. HEDRICK. How much personnel does it take to make up a unit usually?

Dr. MOUNTIN. It will vary with the size of the unit. The staffing that has been recommended by the American Public Health Association that I mentioned a little while ago was a medical health officer for each unit, a nurse for each 5,000, and sanitation person for each unit and 1 per each 25,000 additional, and a clerk; and that is the minimum unit recommended by the American Public Health Association.

Mr. HEDRICK. And the physicians have to be full time in their duty?

Dr. MOUNTIN. That is what is recommended; that he be a trained public health officer, especially schooled in the methods of disease prevention and that he give his whole time to planning the program and executing it, rather than giving medical care, being a physician, we will say, to the indigent population.

Mr. HEDRICK. You take in counties where there are two or three pretty good-sized cities. Cities usually have their health department in addition to the county unit; do they not?

Dr. MOUNTIN. That is still a common practice, although I think the general opinion now is veering toward combinations of cities and counties, with the exception perhaps of very large cities, but for the cities of medium size, and even fair size, many are combining now with their counties, because cities are tending to extend out into the surrounding area and the line of demarcation between the city and the county is becoming less and less distinct.

I don't think anybody has ever recommended that every county in the United States have a full-time health department because we have some counties that run down to a few undred in population. They recommend that counties be combined into units where you would get, I think the State health officers would recommend, units of not less than 35,000 as units of administration.

Mr. HEDRICK. A smaller or poorer county could not afford to have a full time staff.

Dr. MOUNTIN. That is right. The service becomes expensive.

Mr. HEDRICK. A full-time health unit would run seventy-five or a hundred thousand dollars, would it not?

Dr. MOUTIN. Oh, no. This minimum unit will cost about fifteen or twenty thousand; say a health officer, a couple of nurses, a sanitary engineer and a clerk; between fifteen and twenty thousand. That is providing some for transportation and office space. You wouldn't run a laboratory, however, and you wouldn't have a full complement of personnel, highly trained health educator, engineer, or epidemiologist.

It is presumed some of that kind of technical service will come from the State. That local unit will do what we call the basic services, and the more technical services, together with laboratory work, would be provided by the State, either through its central laboratory or its regional laboratory.

Mr. HEDRICK. What is the usual salary for a full-time health officer?

Dr. MOUNTIN. I would think between $7,500 and $10,000. I am getting this right off of my mind now. I would have to check that, but that is what I think it is.

I think that will pretty well agree with what our data in the office shows.

Mr. HEDRICK. Most of these health units are located in the courthouse or some county building in which they would not have to pay rent; is that correct?

Dr. MOUNTIN. Unfortunately that is too often the case.

The recommendation is that a health center be built where they can have facilities for carrying on a comprehensive and modern public health program. As a matter of fact, under the Hospital Survey and Construction Act, it is possible to make funds available for the construction of health centers. Now these centers can be distinct buildings, or they can be tied in with a hospital, or close to a hospital. In fact, it is recommended that they be built close to a hospital whereby the X-ray facilities and the laboratory facilities of the hospital might also be utilized by the health department.

Mr. HEDRICK. At that rate it should not cost more than $15,000 or $20,000. If you paid your doctor $10,000 or $12,000 a year——

Dr. MOUNTIN. I said $7,500 to $10,000, and the nurses will run $2,500 to $3,000, and the sanitarian about the same. If you have an engineer it will run more. I said, if you have a laboratory and you operate a health center, it will run more than that. I was giving you the salaries of the staff and also it will depend upon the extent to which facilities that exist in the hospital are utilized jointly.

The cost will be determined also by that.

OPERATIONS OF LOCAL HEALTH UNITS

Mr. HEDRICK. Do most of these units have a nurse that does nothing else except investigate venereal diseases?

Dr. MOUNTIN. That does occur in some places, although I think the public health opinion today is in favor of rather general purpose personnel. Nurses, when they go into a home or a community, will do infant welfare work, school health work, communicable disease control, investigate venereal diseases. It is a more efficient way of operating than having specialized personnel for each and every category.

I think that is the trend of opinion today, and certainly it is the trend in practice.

Mr. HEDRICK. In most counties do they operate a venerial clinic in connection with their health program?

Dr. MOUNTIN. I can't say whether in most; in quite a few of them they do. In other instances, their arrangements are made with the practicing physicians, or if there is a nearby rapid-treatment center, that might be utilized. Some of them do run a venereal disease clinic. I can't give you the exact proportion, but provision is made for handling venereal diseases. That I can say categorically.

Mr. HEDRICK. Is penicillin furnished free of charge to these clinics usually?

Dr. MOUNTIN. That I think is the common practice. Now that varies. In some instances, some States, and in some localities they choose to supply it to the lower income groups and require those of the higher income groups to utilize their physicians, and pay for their drugs.

Mr. HEDRICK. Isn't it a fact that many people go to these clinics and get free treatment when they are able to pay for it?

Dr. MOUNTIN. I can't answer that. I think that that is pretty well under control. It is a matter of local determination. Policies are determined by the local county authorities, working in collaboration with the local medical society, and as far as I am aware, quite a satisfactory arrangement is effected. It yet accomplishes the job of controlling venereal diseases. That is a matter of local determination. We don't determine that.

Mr. HEDRICK. You do not believe a person should get free treatment when they are able to pay for it, do you?

Dr. MOUNTIN. I don't think that is implicit in any of these programs.

Mr. HEDRICK. I believe that is all.

Mr. FOGARTY. Judge McGrath?

Mr. MCGRATH. No questions.

Mr. FOGARTY. Mr. Denton?

RECOMMENDATIONS FOR POOR COUNTIES

Mr. DENTON. What recommendation or remedy do you propose in these counties under 35,000, or poor counties that cannot afford to have a health department?

Dr. MOUNTIN. That has been met in several ways. It is recommended by most of the authorities in public health administration that counties be combined, either by some sort of voluntary agreement, or by some special permissive statute of the State, or that the State itself organize what they call health districts; in other words, the object is to get the service as local as is possible, and yet not have the overhead costs run too high.

If we make it too local, that is, if you try to get a health department in too small a county, it becomes too expensive. Therefore, they recommend larger units of administration.

Mr. DENTON. How much success have you had in setting up those plans?

Dr. MOUNTIN. I just mentioned that since 1935, the number has grown from——

Mr. DENTON. I do not mean that.

Dr. MOUNTIN. The number of districts?

Mr. DENTON. Yes.

Dr. MOUNTIN. In 1935, I have 41 local health districts, and in 1950, 320.

Mr. DENTON. That is the kind of district you speak of that is a health district?

Dr. MOUNTIN. No; those are local districts.

Mr. DENTON. That is like in my town; we have a city and county board of health.

Dr. MOUNTIN. That would be a combination of the health district, yes.

Mr. DENTON. What I was thinking about was that figure of 35,000 for other communities? I wondered how much success you had in setting up multiple-county units or health districts that you spoke of outside of the larger communities.

Dr. MOUNTIN. I want to be sure I get my fingers correct. According to my figures here, we had 41 health districts in 1935 and 320 health districts in 1950, an increase of 279, and then we had 29 State health districts in 1935, and they grew to 65 State health districts, an increase of 36.

Mr. DENTON. That is the State health districts?

Dr. MOUNTIN. That is right.

Mr. DENTON. How much of the country would you say is not covered by some part of a health program? The large cities would all be, but I am talking about small ones.

Dr. MOUNTIN. There are some 45,000,000 people not under the kind of local health organization we are describing, but 33,000,000 not covered if State health districts are also taken into account.

Mr. DENTON. That is all.

PART-TIME HEALTH OFFICERS

Mr. HEDRICK. Doctor, practically all counties have a part-time health officer if they do not have anything else, do they not?

Dr. MOUNTIN. There is some authority there; yes, sir.

Mr. HEDRICK. For about 17 years I served as part-time health officer.

Dr. MOUNTIN. Is that right?

Mr. DENTON. Many of them just collect vital statistics, do they not?

Dr. MOUNTIN. Some of them aren't physicians. They are lay health officers, and some of them have very little or no training. It is that lack of organization that we are trying to remedy, feeling as though the basic purpose should be to get professionally trained health officers on the job, utilizing units of administration that are economically sound, and where the local resources are such that a substantial part of the support can be derived from local revenues.

Mr. DENTON. That is all.

Mr. FOGARTY. Mr. Schwabe.

Mr. SCHWABE. Doctor, this is one function or service that I have never understood very well and I am frank to say to you that I do not understand it much better now that you have been explaining it than I did before, and that may be a reflection on me rather than you, so there is nothing personal intended by my remarks; but I am frank to tell you that I cannot see how you are going to have an organization of these local health units which you say now fails to serve approximately a fourth of our population in the United States, and how you are going to get that effective in the rural communities generally speaking where sparse population prevails without spending a tremendous amount of money and perhaps accomplishing very little after you spend it.

On the other hand, where you have these more congested areas and cities and more populous rural communities, it has occurred to me from my observation they will pretty well take care of the situation locally any way.

Now what I am trying to get over is that it seems to me that you are supplementing what is being pretty well taken care of and cannot do that which has not been exceptionally well taken care of in the past.

A lot of these folks that you are talking about serve as more or less sanitary officers, or people who put up quarantine signs and who do a lot of routine work, as a matter of fact, rather than professional work; is that not right?

Dr. MOUNTIN. That is precisely what we are trying to remedy.

Mr. SCHWABE. And so far as the professional work is concerned, it has never been my observation that the medical profession has allowed the public to suffer seriously for want of attention.

I know what it is; that we do not want to have many doctors in the sparsely settled communities as we once did, country doctors, and where we need them sometimes very badly, but as a general proposition, supply and demand has pretty well taken care of that situation and I do not see how you are going to supply that with your programs to the extent that it is going to meet the requirements. If it is indigent groups that you want to take care of, do not think there are very many communities in the United States that will not take care of them anyway.

Dr. MOUNTIN. That is right.

Mr. SCHWABE. They have taken care of them. That is historically true.

Now so far as this other program is concerned, I just would like to see you get your teeth into something here that will show us where your service is really giving us value received here, where we are getting our money's worth. There is $16,000,000 here. Can you point out where we are actually getting our money's worth here? Give us some tangible stuff.

Dr. MOUNTIN. Well, I think that much of the things, the services that these funds are supporting, are the sort of things that we take for granted.

Mr. SCHWABE. Now you are talking about generalities again.

Dr. MOUNTIN. No; I am coming down to specifics.

In the United States it is possible to go into any town today almost and to turn on a tap in a hotel and drink water without fear of getting typhoid fever.

Mr. SCHWABE. You have not made that possible in your department have you?

Dr. MOUNTIN. We think we had a substantial part in it.

Mr. SCHWABE. What have you done to make that possible? Now just tell us.

Dr. MOUNTIN. First of all, we have carried on basic research. We found out the methods of purifying water. We have carried on this training program that I have described for water and sewage plant operators.

Mr. SCHWABE. That information so far as you had it available you passed on down to the State authorities and their local authorities; is that correct?

Dr. MOUNTIN. That is our method.

Mr. SCHWABE. They had been working all the time on it too, especially the State authorities; is that right?

Dr. MOUNTIN. We work through and with the States.

Mr. SCHWABE. That dovetails, one to the other. You do not deserve all the credit for that by any means.

Dr. MOUNTIN. By no means; we never have pretended to take credit for all of the public health work that is going on in the United States.

Mr. SCHWABE. We are talking about these specific cases, water pollution and sanitation.

Dr. MOUNTIN. I am trying to be specific. I am trying to say how public health is protected, and how we have reached the state of health we have in the United States and a lot of it comes about because of these various services that go on quietly, unobtrusively, that are protecting our health, that don't exist elsewhere. I started to say what you can do as to drinking water in the United States which you can't do elsewhere in the world. I won't say nowhere else in the world, but when you travel outside of the United States you don't turn on a tap in a hotel without fear of coming down with a diarrhea and a dysentery. You can go into a restaurant almost anywhere in the United States and eat almost any article of diet, including a raw salad.

Mr. SCHWABE. That is due to your restaurant and hotel inspections of the States and cities primarily is it not?

Dr. MOUNTIN. It is due to State and local——

Mr. SCHWABE. We pay for it out there pretty thoroughly.

Dr. MOUNTIN. That is where part of the funds go.

Mr. SCHWABE. What part of it goes into restaurant and hotel inspection?

Dr. MOUNTIN. I didn't say we inspected hotels.

Mr. SCHWABE. What part of these funds go into that?

Dr. MOUNTIN. We support services. We support organizations that provide these services. Now specifically, of the funds, of the amount of money that this $13,540,500 that we just mentioned, I said that $1,350,995 goes into environmental sanitation; $158,585 goes into food and drug work; that is, it is used by the States and the localities to do that work. Now in addition to what is done by the State——

Mr. SCHWABE. Let me interrupt you just a minute. This food and drug you are talking about, the Food and Drug Administration

then comes in for part of that. Wherein do you overlap with them, or duplicate them?

Dr. MOUNTIN. No.

Mr. SCHWABE. What do you furnish for that money, that million plus?

Dr. MOUNTIN. That is used by States and localities.

Mr. SCHWABE. For what?

Dr. MOUNTIN. To provide control over food and drugs, including this restaurant work. The great bulk of it is restaurant, and I mentioned too that $5,392,206 out of this $13,000,000 was paid by the State over to the local health department, which carry on this kind of service that I have described—this nursing service, this sanitation service, this communicable disease control—and, in other words, they provide this health protection which gives us this high level of health which we enjoy in the United States.

FUNDS FOR MULTIPHASIC SCREENING PROJECTS

Mr. SCHWABE. How much does this Boston, Indianapolis, and other pilot-plant units that you have got over the country cost?

Dr. MOUNTIN. Those are minimal.

Mr. SCHWABE. How many of them do you have?

Dr. MOUNTIN. We only have three or four. I mentioned one merely at Gallinger, one at Boston, one at Indianapolis, and those are studies.

Those are not services. There we are trying to find new facts and work out procedures.

Mr. SCHWABE. Give me the answer to the question, if you can. About how much are those costing?

Mr. FOGARTY. The Federal contribution to the one in Richmond according to the testimony last year was $25,000.

Mr. SCHWABE. How about Indianapolis? If he has the figures I would like for him to supply them, Mr. Chairman, for each one of these projects.

Mr. FOGARTY. Surely.

Mr. SCHWABE. Will you do that, Doctor, for the record?

Dr. MOUNTIN. I thought I had them here.

Mr. SCHWABE. You do not need to do it right now.

Dr. MOUNTIN. I won't take up the time to find it.

(The information is as follows:)

Cost of Public Health Service participation in selected multiple screening projects

Activity	1950 cost	1951 estimate
Richmond, Va	$25,000	
Boston, Mass	15,200	[1] $1,635
Flanner House, Indianapolis, Ind	22,000	22,282
District of Columbia (Gallinger Hospital)		11,114

[1] Month of July 1950 only.

Mr. SCHWABE. I believe that is all.

Mr. FOGARTY. Mr. Busbey?

GENERAL HEALTH WORK FUNDS, 1951

Mr. BUSBEY. Doctor, you mentioned awhile ago about the ratio that different States are spending in comparison to what you have given them in grants.

Dr. MOUNTIN. That is right.

Mr. BUSBEY. Could you supply for the record the ratio of the different States and Territories that you spoke of so we could see the comparison?

Dr. MOUNTIN. Yes. I would be glad to.

(The information is as follows:)

Amounts available for general health work, fiscal year 1951 [1]

State	Total	State and local funds	Federal funds	Ratio of State and local to Federal funds
United States	$144,707,275	$131,166,775	$13,540,500	10:1
Alabama	1,637,022	1,258,222	378,800	3:1
Arizona	333,000	238,000	95,000	3:1
Arkansas	1,140,978	857,978	283,000	3:1
California	16,295,696	15,633,196	662,500	24:1
Colorado	944,727	819,527	125,200	7:1
Connecticut	2,394,394	2,264,494	129,900	17:1
Delaware	154,576	131,976	22,600	6:1
District of Columbia	1,853,909	1,796,009	57,900	31:1
Florida	3,049,074	2,815,874	233,200	12:1
Georgia	3,162,900	2,783,300	379,600	7:1
Idaho	267,290	186,690	80,600	2:1
Illinois	6,590,503	6,039,903	550,600	11:1
Indiana	2,461,078	2,134,178	326,900	7:1
Iowa	719,838	480,938	238,900	2:1
Kansas	1,148,397	961,897	186,500	5:1
Kentucky	3,946,435	3,577,835	368,600	10:1
Louisiana	2,345,954	2,039,054	306,900	7:1
Maine	474,937	377,037	97,900	4:1
Maryland	4,614,541	4,457,641	156,900	28:1
Massachusetts	3,010,387	2,671,387	339,000	8:1
Michigan	3,511,221	3,044,121	467,100	7:1
Minnesota	1,975,973	1,699,673	276,300	6:1
Mississippi	1,532,752	1,182,252	350,500	3:1
Missouri	2,252,444	1,900,844	351,600	5:1
Montana	326,987	262,687	64,300	4:1
Nebraska	711,062	574,562	136,500	4:1
Nevada	143,128	103,828	39,300	3:1
New Hampshire	330,331	272,731	57,600	5:1
New Jersey	1,062,902	740,602	322,300	2:1
New Mexico	491,026	401,526	89,500	4:1
New York	28,495,405	27,635,305	860,100	32:1
North Carolina	4,587,161	4,111,661	475,500	9:1
North Dakota	421,932	347,532	74,400	5:1
Ohio	5,868,821	5,291,531	577,300	9:1
Oklahoma	1,490,381	1,219,881	270,500	5:1
Oregon	1,550,002	1,390,302	159,700	9:1
Pennsylvania	7,843,248	7,015,948	827,300	8:1
Rhode Island	358,223	304,123	54,100	6:1
South Carolina	1,345,601	1,070,601	275,000	4:1
South Dakota	181,141	103,641	77,500	1:1
Tennessee	2,043,209	1,672,409	370,800	5:1
Texas	4,462,243	3,743,443	718,800	5:1
Utah	410,399	321,299	89,100	4:1
Vermont	235,727	189,127	46,600	4:1
Virginia	3,499,787	3,194,487	305,300	10:1
Washington	3,841,874	3,654,374	187,500	19:1
West Virginia	1,080,048	870,648	209,400	4:1
Wisconsin	2,580,771	2,308,071	272,700	8:1
Wyoming	106,130	54,230	51,900	1:1
Alaska	87,969	37,169	50,800	¾:1
Hawaii	1,462,585	1,410,185	52,400	27:1
Puerto Rico	3,813,525	3,462,025	351,500	10:1
Virgin Islands	57,621	50,821	6,800	7:1

[1] State and local funds are based on amounts included in budgets submitted to the Public Health Service by State agencies administering the several grant-in-aid programs. They exclude identified amounts for construction, and for general hospital care, and amounts as estimated by the States for control of venereal disease, tuberculosis, heart disease, cancer, and for mental health. Amounts identified for matching Children's Bureau grants have also been excluded.

ASSUMPTION OF RESPONSIBILITY BY STATES

Mr. BUSBEY. How much was the State of Illinois given in grants last year?

Dr. MOUNTIN. For Illinois, on general health, it had $550,600.

Mr. BUSBEY. Did they have any other grants?

Dr. MOUNTIN. Yes; on venereal diseases they had $307,400; TB, $296,500; I have already mentioned general health; mental health, $154,100; heart disease, $61,400; cancer, $162,300, on water pollution, $25,100, and on hospital construction, $2,348,997.

Mr. BUSBEY. You have an allocation formula that each of the States have to meet in order to receive these grants?

Dr. MOUNTIN. We have a general allocation formula and then the State gets what the formula provides. It is based on population, financial need, and the special health problem, and wherever the State falls on the scale is what it gets.

Mr. BUSBEY. Doctor, I do not want you to get the wrong impression that I am against these programs, but at the same time I always try to work toward the States assuming their responsibility in order to keep from coming to Washington and feeding at the Federal trough. I am something like Mr. Schwabe here. I would like to see the States take hold of these programs inasmuch as they supply such a large percentage of the funds that are spent on health, and assume the rest of it.

I do not see any reason why the States cannot carry on a large part of these programs without coming to Washington for money. It seems like the general idea in Illinois is no different than any other State. Every time they want to start a program, they try to figure out what department in Washington they can tap for some of the money, and the States, the record shows, are in very good financial condition as a whole to carry on these programs compared to the Federal Government, with a two-hundred-and-fifty-nine-odd billion dollar debt.

A great many of these States have been decreasing their debts. The State debts have been decreasing, while nationally ours has been going up by the billions and it does not seem consistent with me that these States in such good financial condition should be coming down here for money when we are in such poor financial condition.

Mr. HEDRICK. I wonder if you would tell us how much surplus Illinois has.

Mr. BUSBEY. Well, Doctor, 2 years ago I made a study of all the statements of the State treasurers for the 48 States, and I do not recall the figures in all 48 States offhand, but I do know that in 90 percent of the cases they had reduced their State debt, and some of them had no State debt at all and still they were coming down here to Washington for money.

It just does not seem reasonable to me.

SELECTING A SITE FOR A CLINIC

Where you set up a clinic or a test case like you have in Indianapolis, what is the yardstick you use in selecting a site?

Dr. MOUNTIN. Well, either we or the State, whichever, the initiative might come from, has a particular problem that it wishes to

study and we pick out a place where the facilities and the problems are such that it can be studied, where we will get the kind of cooperation and participation that are necessary to make it successful. Now I don't mean that there wouldn't be other places; there would be many places, but with a limited amount of money when we can only do one we have to pick out one place.

Mr. BUSBEY. I have nothing against the city of Indianapolis whatever, but I was just trying to figure out what procedure you went through to select Indianapolis over Cincinnati or Evansville or South Bend, or Detroit, or some other city.

Dr. MOUNTIN. We have projects going of one type or another in a variety of places in the country. We try to distribute them as best we can geographically, but the primary consideration in these research projects is a place in which we can get a definitive answer for the least amount of money, and within a reasonable time.

STATE AGENCY RECEIVING GRANT FUNDS

Mr. BUSBEY. In regard to these funds turned over to the State of Illinois, what is the particular agency that receives those funds in Illinois?

Dr. MOUNTIN. For the most part it is the State health department. I don't have the Government structure of Illinois in my mind at the moment. In some instances, with respect to hospitals, there is a hospital authority other than the State health department. I think the State health department in Illinois is the hospital authority. With respect to mental diseases, mental hygiene, in more than half of the States, the State health department is the State mental authority, but there are States in which there is another authority. That authority is determined by the State legislature.

Mr. BUSBEY. Do you make an audit to see that these funds were spent properly, or do you have an accounting from the State health department as to how those funds were spent?

Dr. MOUNTIN. Yes; by and large it is not a detailed voucher audit, although we do spot check the State audit, so there is an audit of the fund; yes, sir.

Mr. BUSBEY. That is all, Mr. Chairman.

EFFECT ON THE HEALTH OF THE PEOPLE IF FUNDS WERE DENIED

Mr. FOGARTY. Dr. Mountin, what would be the effect on the health of the people of our country if we just denied this $13,540,500 of grants to States for general health?

Dr. MOUNTIN. I would hesitate to say and be called upon to prove my statement a year from now in case such disaster did occur.

I would like to speculate, though. I think that we can show a substantial improvement, as I have attempted to do in my testimony, during the period that this program was in operation. I don't want to give the impression at all that a good bit of it might not have happened, and I am sure it would, if we weren't in the picture at all.

I am also convinced that our being in it has had a substantial effect. There are States where the financial component is minimal, where that is not a great factor; there are other States, however, where it is quite a substantial factor and denying these funds to some of the States would

mean the liquidation of some of the enterprises, but in some of the other wealthier States, probably they would have gone on.

Quite aside from the financial side, and I dislike to use this term, but I do think that we have had a sort of a stimulating, a moral effect, if you want to call it that. The mere fact the Federal Government has seen fit to interest itself in the citizens of the United States even though it has made only a token sum available has enabled its people to go out and participate with the State and local health departments, this I think has helped in substantial measure—I can't give it a financial value nor neither can I give it any percentage weighting as to the effect. However I am thoroughly convinced that it has had a substantial effect and abandoning the program now I think might be interpreted as the Federal Government abandoning its interest in the health of the people.

Just what the long pull effect of that would be I can't say, but I think it definitely would be depressing.

AMOUNT OF APPROPRIATIONS AUTHORIZED

Mr. FOGARTY. What amount is authorized? What appropriation is authorized by the basic law?

Dr. MOUNTIN. $30 million is the ceiling. That includes mental health. I think there is some $12 million that is unutilized.

Mr. FOGARTY. The basic law authorizes a ceiling of $30 million.

Dr. MOUNTIN. Yes, $3,000,000 for demonstrations and training, and $27,000,000 for grants, and we have $1,725,367 left under the ceiling that is unused under the demonstration ceiling, and $10,000,000 or better, $10,359,500 under the grant ceiling. It is unutilized.

EXAMPLES OF LEADERSHIP AND STIMULUS PROVIDED BY FEDERAL FUNDS

Mr. FOGARTY. Do you think the States would on their own initiative initiate any of these programs, like the one that was initiated in Richmond and this program you have going in Indianapolis and Boston, if it had not been for Federal aid from the Government?

Dr. MOUNTIN. I don't mean to say that nothing would happen if we weren't in the picture, not at all, and as a matter of fact the Richmond project was largely of local origin. The health officer down there, did a good bit of that on his own. We by no means would presume to say that all enterprise in the health field emanates from the Federal Government.

Mr. FOGARTY. I do not say all. I am talking about some of these demonstration projects that you are putting on at the present time. The thing I had in mind was 3 years ago this committee itself, not by authorization of the Congress or being asked by you people or the dental profession or people, but when it came to the attention of this committee that sodium fluoride had been discovered in the general care of children's teeth and had been approved by the American Dental Society, we made funds available for a dental demonstration team for every State in the Union. As a consequence the children of every State in the Union today are entitled to these sodium fluoride treatments. If this committee had not taken that action 3 years ago, I do not know of a State in this Union that perhaps would have any demonstration team in it at the present time.

Dr. MOUNTIN. I don't know whether I would go quite that far, but there is a lot of them, I am quite sure, would not have. I am sure we certainly accelerated the process. That is the application of sodium fluoride. Likewise, we have accelerated the addition of sodium fluoride to the water supply as a means of preventing dental caries. First, our funds were available for research, and then the next step, demonstration and then the final step of becoming a partner is true, a somewhat minor partner in the total enterprise, but nevertheless in there participating with State and local health agencies.

PERFECTION OF MASS SCREENING

Mr. FOGARTY. In the program that went on in Richmond, the one in Boston and the one in Indianapolis, how many operations to date could you say are perfected for a mass screening test?

Dr. MOUNTIN. I hate to answer that question definitively because there is so much disagreement, and I mean honest disagreement as to just what a lot of these tests mean. We have had so little experience with them in the general population; we have had so little time to follow up on these people, I think it would just be a pure guess, and I think next year, when we analyze our data, I would probably be the first to come back and contradict the statement I make today.

Now with respect to serology for syphilis, there is one I think we can say positively it is not infallible by any means, but it is highly reliable. Ultimately we hope to have the rest of them to that stage of perfection, but they are a long way from that now.

Mr. FOGARTY. Dr. Chapman said a year ago in answer to a question by Mr. Keefe, during a discussion for an increase for screening teams:

> Dr. CHAPMEN. Yes, sir. We have a concept of multiphasic screening here in which we have to feed newer and better screening tests. To use that we have to operate pilot studies in the categorical fields. There is a syphilis test requiring only a finger prick that is under way. There is a diabetes test in which we can prick the finger, put a drop of blood on filter paper and mail it to the doctor.
>
> All of those will be tested in our diabetes demonstration, of which we have four, and in this mass screening test we will try it out. When perfected, we will add it to our multiple screening test as a perfected operation.

Dr. MOUNTIN. That is correct.

Mr. FOGARTY. That is the reason for my question. What perfected tests have been made up to this point for multiple screening test?

Dr. MOUNTIN. I think again I would probably say that the serology, the one for syphilis, is the one that is nearest to being perfected. I think for all practical purposes we could almost call it that.

I wouldn't want to give you the impression that I think we should do nothing before we know all about everything. To a great extent we have to learn to do by doing. We have to test people. We have to examine our simple test, check it against a more elaborate test, and in the final test, we have to follow the person over a period of time and to see whether the guy who had a high level of blood sugar really did develop diabetes. Maybe he did. Maybe a high proportion of them won't. That is the final thing. We have done that with syphilis. We have been working on this test for over 25 years. We have done a whole battery of tests, checked one against each other. We have followed the patients. We have done post-mortem examinations on them, and on not one, but thousands. Now that is the way

that medical science progresses, and that is the way a fact is finally established.

Mr. FOGARTY. It is through pilot studies such as these that you eventually come up with the answer, through simple tests?

Dr. MOUNTIN. That is right; but we don't want to go out and say this is perfect now; it ought to be incorporated into general public-health practice; it ought to be done everywhere else. We are not prepared to say that. It just doesn't seem realistic, and it would be very embarassing to find out it isn't correct and then furthermore it is quite unfair to the patient. If you give a test that shows him to be, let us say, diabetic, he has to go to his doctor for a more elaborate test or if he becomes extremely anxious about himself, thinks he has diabetes when he does not, you have done the patient a great deal of damage; on the other hand if your tests aren't sensitive, and you fail to detect these conditions and you assure the person he is all right, you have also done him a great damage and we don't want to do either one.

Mr. FOGARTY. At the same time if we could evolve some simple multiple screening test of some sort we would save thousands of lives if they could be told to go to their local doctor because they have diabetes, or a lung infection, or cancer, or something like that, or some slight heart condition.

Dr. MOUNTIN. That is what we are hoping for and we are working on it, and will continue to.

Mr. FOGARTY. Any further questions?

ALLOTMENTS TO STATES, 1951

Mr. HEDRICK. I would like to have this table on page 16 inserted in the record.

Mr. FOGARTY. All right.

(The information is as follows:)

Allocation of grant-in-aid funds for general health fiscal year 1951

State or Territory	Allocation	State or Territory	Allocation
Alabama	$378,800	New Jersey	$322,300
Arizona	95,000	New Mexico	89,500
Arkansas	283,000	New York	860,100
California	662,500	North Carolina	475,500
Colorado	125,200	North Dakota	74,400
Connecticut	129,900	Ohio	577,300
Delaware	22,600	Oklahoma	270,500
District of Columbia	57,900	Oregon	159,700
Florida	233,200	Pennsylvania	827,300
Georgia	379,600	Rhode Island	54,100
Idaho	80,600	South Carolina	275,000
Illinois	550,600	South Dakota	77,500
Indiana	326,900	Tennessee	370,800
Iowa	238,900	Texas	718,800
Kansas	186,500	Utah	89,100
Kentucky	368,600	Vermont	46,600
Louisiana	306,900	Virginia	305,300
Maine	97,900	Washington	187,500
Maryland	156,900	West Virginia	209,400
Massachusetts	339,000	Wisconsin	272,700
Michigan	467,100	Wyoming	51,900
Minnesota	276,300	Alaska	50,800
Mississippi	350,500	Hawaii	52,400
Missouri	351,600	Puerto Rico	351,500
Montana	64,300	Virgin Islands	6,800
Nebraska	136,500		
Nevada	39,300	Total	13,540,500
New Hampshire	57,600		

CONTROL OF VENEREAL DISEASE BY THE PUBLIC HEALTH SERVICE

Mr. DENTON. How much work do you think the Public Health Service has done in controlling venereal disease, especially syphilis?

Dr. MOUNTIN. Well, I would think that the work of the public-health organization of the country can be given practically the whole credit for reducing this disease. Now specifically, to separate out the fraction that can be assigned to the work of the United States Public Health Service, I couldn't do it, because we don't operate disassociated from State and local health departments or from the medical profession. We work with them.

Now all of us together have accomplished this reduction.

Mr. DENTON. Dr. Parran some years ago undertook this drive on venereal diseases. I remember reading about it in the paper.

Do you think that drive would have been undertaken if he hadn't spearheaded the drive?

Dr. MOUNTIN. I wouldn't say that that cause would never have been espoused by anybody. Somebody else, if Dr. Parran hadn't been in existence, would have done it possibly. I think we had the good fortune in having Dr. Parran lead us at that.

There wasn't anybody else at the time who was as exorcised about it as he was, and I think we will have to take the facts as they are and recognize that it was his leadership and recognition that did highlight the syphilis problem and rally the resources of the Nation against it.

Mr. FOGARTY. Are there any further questions?

PRIOR-YEAR REQUESTS AND ALLOWANCES

Mr. SCHWABE. Yes.

Doctor, just this one question. I noticed from the figures here in the committee print that apparently you have asked for a considerable sum of money more than you have received for the last number of years, and the Bureau of the Budget has approved a much larger sum than Congress has seen fit to allow or appropriate, and that has varied, beginning in 1947 materially from about $4 million a year, up to some $9½ million, or almost $10 million. Last year you got about $9½ million less than you asked for, which is a cut of some 38 or 39 percent, so it has varied from about 20 percent to 38 or 39 percent; isn't that true?

Dr. MOUNTIN. Is that page 60?

Mr. SCHWABE. Yes, sir; page 60, right at the top. In 1947 you requested and the Bureau of the Budget recommended an appropriation of $19,420,000, and that year there was an appropriation of $15,565,000; is that right?

Mr. THOMPSON. That is right.

Mr. SCHWABE. About 4 million less. Then in the next year, about 5 million less, and 5 million less and then some 8 million less, and then last year it was 9½ million less; is that correct?

Mr. HARLOW. Yes, sir; those are correct figures.

Mr. FOGARTY. I might give some background, Mr. Schwabe.

(Discussion off the record.)

Mr. FOGARTY. Are there any further questions? Thank you very much, Dr. Mountin.

THURSDAY, FEBRUARY 22, 1951.

ENGINEERING, SANITATION, AND INDUSTRIAL HYGIENE

WITNESSES

DR. M. D. HOLLIS, ASSOCIATE CHIEF, BUREAU OF STATE SERVICES
J. E. FLANAGAN, ASSISTANT CHIEF, DIVISION OF INDUSTRIAL HYGIENE
DR. J. W. MOUNTIN, ASSOCIATE CHIEF, BUREAU OF STATE SERVICES
A. ELLIOTT THOMPSON, BUDGET AND FISCAL OFFICER, BUREAU OF STATE SERVICES
DR. LEONARD A. SCHEELE, SURGEON GENERAL
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

ENGINEERING, SANITATION, AND INDUSTRIAL HYGIENE

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
Appropriation or estimate		$3,670,030	$3,800,000
Comparative transfer from—			
"Assistance to States, general, Public Health Service"	$950,000		
"Control of communicable diseases, Public Health Service"	266,820		
"Salaries and expenses, Public Health Service"	662,200		
"Salaries and expenses, water pollution control, Public Health Service"	1,184,009		
"Administrative expenses, water pollution control, Public Health Service"	2,265		
Total direct obligations	3,065,294	3,670,030	3,800,000
REIMBURSABLE OBLIGATIONS			
Comparative transfer from—			
"Salaries and expenses, Public Health Service"	1,800		
"Salaries and expenses, water pollution control, Public Health Service"	1,750		
Total reimbursable obligations	3,550		
Total obligations	3,068,844	3,670,030	3,800,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
1. Water pollution control	$1,179,429	$1,491,283	$1,457,000
2. Radiological health services	67,198	222,074	415,000
3. Milk and food sanitation and other general sanitation activities	653,110	679,177	683,000
4. Sanitation of interstate land, water, and air carriers	424,561	431,828	432,000
5. Industrial hygiene	618,374	705,896	668,000
6. Administration	122,622	139,772	145,000
Total direct obligations	3,065,294	3,670,030	3,800,000
REIMBURSABLE OBLIGATIONS			
1. Water pollution control	1,750		
3. Milk and food sanitation and other general sanitation activities	1,800		
Total reimbursable obligations	3,550		
Total obligations	3,068,844	3,670,030	3,800,000

Obligations by objects

Object Classification	1950 actual	1951 estimate	1952 estimate
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	558	622	649
Full-time equivalent of all other positions	3	3	3
Average number of all employees	487	588	615
Personal service obligations:			
Permanent positions	$2,353,048	$2,842,607	$3,015,840
Part-time and temporary positions	11,584	12,587	13,337
Regular pay in excess of 52-week base	5,920	----------	7,269
Payment above basic rates	1,836	400	400
Total personal service obligations	2,372,388	2,855,594	3,036,846
DIRECT OBLIGATIONS			
01 Personal services	2,371,134	2,855,594	3,036,846
02 Travel	201,499	252,819	270,008
03 Transportation of things	39,491	20,281	20,883
04 Communication services	18,306	23,500	25,130
05 Rents and utility services	75,753	130,333	46,209
06 Printing and reproduction	59,963	126,150	128,750
07 Other contractual services	56,378	58,049	68,025
08 Supplies and materials	72,820	83,226	99,998
09 Equipment	169,950	119,878	103,551
15 Taxes and assessments	----------	200	600
Total direct obligations	3,065,294	3,670,030	3,800,000
REIMBURSABLE OBLIGATIONS			
01 Personal services	1,254	----------	----------
02 Travel	1,841	----------	----------
03 Transportation of things	150	----------	----------
08 Supplies and materials	185	----------	----------
09 Equipment	120	----------	----------
Total rimbursable obligations	3,550	----------	----------
Total obligations	3,068,844	3,670,030	3,800,000

Buildings and Facilities, Cincinnati

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	----------	$1,400,000	$2,400,000
Applied to contract authorization	----------	----------	−2,400,000
Contract authorization	----------	2,400,000	----------
Prior year balance available (appropriated funds)	$182,603	67,954	367,954
Total available for obligation	182,603	3,867,954	367,954
Balance available in subsequent year (appropriated funds)	−67,954	−367,954	−40,000
Total obligations	114,649	3,500,000	327,954

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Construction of Public Health Service building	----------	$3,460,000	$300,000
2. Design, supervision, etc	$114,649	40,000	27,954
Total activities	114,649	3,500,000	327,954

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
04 Communication services	$16		
06 Printing and reproduction	1,454		
07 Other contractual services	13		
Services performed by other agencies	113,166	$3,500,000	$327,954
Total obligations	114,649	3,500,000	327,954

Water and Pollution Control Grants

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$1,000,000	$1,000,000	$1,000,000
Prior year balance available		4,573	
Total available for obligation	1,000,000	1,004,573	1,000,000
Balance available in subsequent year	−4,573		
Total obligations	995,427	1,004,573	1,000,000

Obligations by activities

Grants to States and interstate agencies for industrial waste studies, surveys, and research—1950, $995,427; 1951, $1,004,573; 1952, $1,000,000.

Obligations by objects

11 Grants, subsidies, and contributions—1950, $995,427; 1951, $1,004,573; 1952, $1,000,000.

General Statement

Mr. Hollis. Mr. Chairman, this appropriation covers such a wide range of fundamental programs that perhaps a brief general comment might clarify just what operations are involved. This estimate covers our statutory responsibilities in the associated fields of engineering, sanitation and industrial hygiene. Expressed another way, these estimates cover health problems associated with the environment—health problems of such basic essentials as air, water, food and shelter. These environmental measures, as undramatic as they may appear, are the very foundations upon which public health programs are built.

First, under engineering are the programs for the protection and improvement of water resources for industry and municipalities, sewage disposal and industrial waste treatment—the national program of water pollution abatement—and the Nation-wide program of interstate carrier sanitation.

Second, under sanitation are those activities relating to milk and food, school and rural health, and the program of shellfish sanitation, as well as limited assistance to other Federal agencies, such as the National Park Service, the Indian Service, Bureau of Prisons, and the like.

Third, the appropriation provides for important work in the field of industrial hygiene, which activity is aimed at protecting the health of industrial workers.

Included also in this estimate are funds for limited work on problems in the field of radiological health—the impact on health of the developing atomic age.

In comparison to the several billion dollars annually expended by municipalities and private enterprise to bring these utilities and services to the people, the Federal health contribution is modest. Under normal conditions of orderly progress and expansion, health protection of public water supply, food and milk, as well as the disposal of sewage and waste, are primarily the responsibility of State and local officials. Under such conditions Federal services are limited to research and investigation, assistance on highly technical matters and handling of problems interstate in character—problems beyond the resources and jurisdiction of individual States. However, these basic health services are more seriously affected by abnormal situations such as are arising from our defense build-up. Further, the speed-up in industrial output introduces new factors affecting the environment. These added pressures produce inevitable breaks and throw increasing strains on the Federal machinery. Hence program activities must necessarily be adjusted better to meet current needs.

Engineering, Sanitation, and Industrial Hygiene

BUDGET ESTIMATE FOR 1952

The estimate for fiscal year 1952 totals $3,380,000. The base for fiscal year 1952 is $3,558,083. I should like to high light the six major fields of activity covered by this appropriation. In so doing I will follow the order of the outline in the budget document.

WATER POLLUTION CONTROL

The first activity—water pollution control.

Water is a raw material critical to industrial expansion. Over the past 10 years water needs of industry have increased 36 percent. In many highly industrial areas, quantity and quality of water will control further industrial development. Examples of such areas are Youngstown, Ohio; Bethlehem, Pa., and the northeast New Jersey area.

The total answer to the water problem involves two factors: (*a*) river basin development programs, including water impoundments with regulated minimum flow; and (*b*) water pollution abatement measures to reclaim and safeguard water quality for reuse.

Stream flow regulation through construction of water impoundments is a long-range objective. Pollution abatement to permit reuse of surface water is an immedate need for supporting industrial and municipal growth. Control of pollution is essential to protect existing industry as well as to meet the 25-percent increase in production planned for the next 5 years.

Previously before this committee, Mr. Chairman, we have set forth in some detail our pollution abatement program as directed by Public Law 845, Eightieth Congress, and outlined our working time schedules. Since this is already a matter of record, I will limit my comment to a statement of where we are and the proposals for fiscal year 1952 to meet the demands of the national emergency.

As to the comprehensive water pollution control programs for each major watershed, the collection and analysis of existing data for use in developing such blueprints will have been completed by July of this year.

This first step, within limitation of these data, will set forth the kind and degree of pollution entering our waterways and the general

condition of the major streams of the Nation. Of more importance, it will point up gaps in existing knowledge. It will be the base document upon which to advise with proper officials as to location and expansion of industry and will be used to determine corrective measures to protect water quality.

Public Law 845 also directed the development of uniform State legislation. Working in close cooperation with National, State, and interstate agencies, a suggested act, drafted by the Public Health Service, has been formally adopted by the Council of State Governments.

The third objective of research into methods of industrial waste treatment is moving forward at a limited pace. I would like to report the formation of a National Industrial Task Committee, which committee is devoting itself to promoting industrial research on specialized problems of industial waste utilizing the research resources of industry. This committee, we believe, represents an outstanding development in industry-government cooperation. Its membership covers 30 broad categories of industries representing more than 10,000 industrial plants.

CONSTRUCTION OF WASTE TREATMENT WORKS

Concurrently with these developments has been an effort to stimulate needed construction of municipal and industrial waste treatment works in the more critically polluted areas. In this connection since 1948 there has been a sharp increase in municipal sewage treatment plant construction. Using 1946 as a base, in 1947 such new construction served 1,000,000 population; by 1948, 3,000,000 population were served by new sewage treatment works; by 1949, 9,000,000, and by the end of last year, 1950, 16,000,000.

In other words, since 1946, municipal treatment works have been constructed to serve a population of an additional 16,000,000. This construction represents a public expenditure of 1,000,000,000. For the same period, industry constructed more than 500 industrial waste-treatment works.

We know it will be difficult to predict the availability of manpower and materials for these types of construction in the immediate years ahead. Hence the cooperative blueprint of water pollution abatement need for each watershed will be set up under three categories:

1. Corrective measures to meet essential water quality demands of industry and municipalities.

2. Corrective measures necessary to protect the streams for other legitimate uses, such as agriculture, irrigation, fish and aquatic life, and recreation. Over 400 shellfish areas have been closed.

3. Corrective measures designed to fit the ultimate objective of maximum water use.

This plan will give the necessary flexibility to meet the realities of the manpower-materials situation from year to year.

RADIOLOGICAL HEALTH SERVICES

Radiological health services. This activity is aimed at developing the knowledge and techniques necessary for the public health machinery of the Nation to meet the impact on health of the emerging atomic age. This estimate, Mr. Chairman, is in line with the proposed

program as outlined before your committee last year. The health problems from ionizing radiation are not limited to the few major centers operated under direction of the Atomic Energy Commission. For example, shipments of radioactive isotopes now reach all States. During 1950, a total of 15,000 such shipments were made. This represents an increase of more than 200 percent over the total shipments in 1948.

We are still convinced that as this new field of science expands the responsibility for handling normal radiological health problems ultimately will fall on the shoulders of State and local health authorities. Radioactive materials and radiation-producing machines are becoming more and more widely used in industry, in universities, and in hospitals. Accordingly, our entire effort is geared to research and training that will permit States to assume responsibility in this new health field.

Under research, we have three objectives:

1. To develop practical methods for handling and disposing of radioactive wastes. The familiar formulas for the disposition of normal waste materials do not apply to radioactive materials. We must develop new formulas and new techniques for handling radioactive wastes. In this connection, we have promising leads.

2. To observe the behavior of radioactive wastes in natural streams. Again we know that established equations relating to dilution and dispersion do not apply in the case of radioactive material. This activity is underway at Hanford.

3. To develop practical measures for detecting and removing radioactive material from public water supplies. Facilities for making investigations on the decontamination of water supplies are under construction at the Oak Ridge National Laboratory, and we propose to launch our studies vigorously during the next fiscal year. Already we have begun some of the work on a very modest scale.

All of this research and investigation is being carried out in close collaboration with the Atomic Energy Commission. For example, with regard to the decontamination research I should like to read, Mr. Chairman, a letter dated January 6, 1950, from the General Manager of the Atomic Energy Commission, to the Surgeon General of the United States Public Health Service. This letter followed a request of the Atomic Energy Commission that the Public Health Service assume technical direction of this research. The letter reads:

> We are most appreciative of your letter of December 9, 1949, advising of the willingness of the Public Health Service to accept sponsorship of a proposed research project on decontamination of radioactive water supplies at the Oak Ridge National Laboratory to be financed in fiscal year 1950 cooperatively by the Atomic Energy Commission and the Department of Defense. It appears we are in agreement on the timeliness and national importance of these studies. On problems of this type we agree with you that the public interest will be better served by bringing to bear our respective competencies in a collaborative approach.
>
> As a result of discussions between representatives of all agencies concerned, it has been deemed advisable to proceed with the arrangements as planned to carry out the research at ORNL with the understanding that as soon as practical, preferably by July 1, 1950, the Public Health Service will assume technical responsibility for the project. Because of the increasing and continuing responsibility which the Public Health Service would assume in this project, it would seem appropriate that you take the initiative in organizing an advisory board with consultation with the cooperating agencies.
>
> It is recognized that details for financing the program beyond fiscal year 1950 will have to be worked out. The Atomic Energy Commission would prefer that

action toward this end be initiated by the Public Health Service with appropriate support from the Commission.

Paralleling this necessary research and investigation, we have developed at our Cincinnati environmental health center a training facility for State and local health personnel. These courses are scheduled to meet the several levels of professional competence in State and local personnel. The current importance of this activity is obvious.

MILK AND FOOD SANITATION

Milk and food sanitation and other general sanitation activities, $683,000.

This project includes basic sanitation services for water, milk, shellfish, and other foods, as well as activities for improving sanitary methods of garbage disposal, preventing home accidents, and advancing rural and school sanitation. Important research and investigations are conducted in sanitation at our environmental health center in Cincinnati. This facility for research in environmental health is the only one of its kind in the country.

May I emphasize again the increased importance of these basic sanitation activities in a period of national emergency. Shifts in the economy, materials shortages and substitutions, transfers of manpower, pressures for greater production, losses of trained personnel, and population movements, all of these put extra strains on sanitation at the time when health services will be handicapped.

It is hard to overemphasize the importance of these fundamentals. For example, a single water-borne epidemic in one small town, Newton, Kans., in World War II, caused more than 3,000 casualties, a fourth of the local population, crippled two war plants, and infected large numbers of soldiers on troop trains.

Outbreaks of food-borne infections, now reported on the average of one a day, are much more common in unsettled periods.

I am satisfied that the shellfish program is sufficiently well established to meet foreseeable needs. I cannot say the same for milk. Once there is heavy migration into areas with milk shortages the present difficulties in interstate milk shipments may well degenerate into chaos. Such troubles have already begun in connection with expanding military establishments.

If there were proper processing of garbage to control trichinosis, it would be possible to increase the feeding of garbage to hogs, and so increase the supply of pork economically. Home accidents killed some 27,000 and permanently disabled 140,000 last year. This drain on our greatest resource, manpower, we are convinced can be reduced by practical methods which we are developing in cooperation with the Kellogg Foundation.

RESEARCH AT CINCINNATI LABORATORY

As to research at our Cincinnati laboratory facility, we are emphasizing problems which require immediate answer in connection with the national emergency. For example, we are developing applicational use of faster, simpler laboratory techniques to make the detection of dangerous elements in water, milk, and food quicker and more certain. Not only will these procedures give answers more quickly, but, of equal

importance, they will also conserve technical manpower by simplifying the job to be done. Applicational research on the new membrane filter shows unusual potential of this development, both as a laboratory tool and possibly for use as an outlet filter. The development of new and more effective sterilizing agents in the field of water supply and food sanitation has a high priority. In the field of chemistry, the synthetics in foods and byproduct industrial waste in water are being given attention. Water supply operations are being plagued with problems of increasing complexity due to the presence in the raw waters of foreign substances having bad tastes and unknown physiological effects. New procedures for specific identification of the troublesome materials are being evolved and the problems of effective treatment pursued.

SANITATION OF INTERSTATE LAND, WATER, AND AIR CARRIERS

This project, Mr. Chairman, is a continuing responsibility of the Public Health Service to protect the health of the traveling public. There are 2 million passengers using these interstate carriers every day. This number may double. To assure the sanitary quality of food, milk, and water consumed on trains, planes, and ships, the Public Health Service certifies more than 1,200 public water supplies and more than 3,000 watering points. Last year we reviewed 100 sets of railway and airline plans and more than 1,000 vessel plans. Three hundred and fifty million dollars was appropriated recently for new ships. These are high-speed vessels, of a new design, the *Mariner* class, to be built to special needs of the national emergency. These ships will be built to meet Public Health Service sanitation standards and our personnel will inspect them for compliance. We also inspect and certify milk plants and food-preparation plants serving the transportation system. Some 2,230 dining cars, and 3,100 vessels in service are under our sanitary supervision. The dining-car inspections are particularly important to protect the health of the traveling public. The Service has been called upon also to check sanitary facilities on troop trains.

On this program we are emphasizing our work with the transportation industry, with particular reference to design and construction of sanitary facilities, the substitutes for critical material, and the training of operating personnel.

INDUSTRIAL HYGIENE

The Public Health Service program in industrial hygiene is concerned with the investigation of health hazards as they occur in industry, with the determination of measures for combating these hazards, and with consultation and assistance to State industrial hygiene units to develop standards of good practice which may be applied in industry in order to increase available manpower and to promote, with special reference to industry, a state of positive health and well being.

Importance of health in industry is emphasized by the fact that the time lost from work as the result of sickness is equal roughly to the services of from one to two million workmen each year. Although many large industrial plants have adequate health services, about

98 percent of all industrial establishments are small companies with no more than 500 workers each. In these small industries the distribution of health services is poor, and they depend upon the activities of State industrial hygiene units for solution of in-plant health problems. The States, in turn, look to the Public Health Service for many technical and scientific resources.

Many industries have learned that scientific control of occupational disease hazards is not only possible, but produces economic returns in increased production, in the reduction of compensation costs, and other benefits. Perhaps the best illustration I can give is to summarize the industrial hygiene activities in Government-owned munitions plants during the last war.

The Public Health Service provided industrial hygiene services to the War Department in many munitions manufacturing plants, whereas in World War I, there was no comparable activity. During World War I, there were 230 fatalities per billion pounds of explosives manufactured; in World War II, there were only 5 fatalities per billion pounds produced. This latter rate is based upon the experience of an annual average of 309,000 employees in 3 years of operation.

In World War II, there were 22 fatalities from exposure to TNT, which can be contrasted with 475 deaths from TNT poisoning which occurred in a short period of 7½ months during World War I, and among a much smaller group of employees. The TNT experience reflects similar reduction in other occupational diseases throughout the 101 plants involved in the production of munitions in World War II. This experience in the munitions industry demonstrates emphatically what a vigorous industrial hygiene program can accomplish in preventing illness and conserving manpower in an industry with many dangerous exposures.

Our laboratories in Cincinnati and Salt Lake City are the only units in the Federal Government solely devoted to work in the field of industrial hygiene. Work is continuously underway to determine the toxicity of new materials and new processes which are introduced constantly in American industry, and to determine effective methods for their control.

At present we are investigating a series of fatalities which have occurred in two copper smelters. The generation of arsine, an extraordinary poisonous gas, in certain phases of copper-smelting operations, caused serious manpower losses. Copper, as you know, is one of our most strategic materials. This work will go on through the next fiscal year in order to develop proper control methods to prevent recurrence of such disasters.

We are also engaged in an important investigation of the chromate-manufacturing plants in the United States. It is known that chromate fumes and dusts cause the development of chrome ulcers and perforation of parts of the nose. It is also known that the incidence of lung cancer is very high in these plants. The industry has been hampered in securing sufficient manpower to maintain production because of the difficulty of controlling chromate fumes and dusts. It is hopeful that during the next fiscal year we will have answers to some of these problems.

Another industry that we are investigating is uranium mining and milling in the Colorado plateau. There are serious hazards because of exposure to ionizing radiation and radon gas, as well as exposure to free silica, which can cause silicosis, and to toxic dusts of uranium

and vanadium. This particular study is one of the most important activities underway at the moment and will continue through the next fiscal year. Its importance to the defense effort cannot be overemphasized.

These investigations are only examples of the types of work which our Division of Industrial Hygiene is called upon to provide from time to time. In fact, so large is the backlog that we are forced to select the more important items that can be performed within the limits of available funds. Reorientation of our program has required delay for some programs for which the Division has had plans for several years. On the basis of experience during the last emergency, it is anticipated that requests will continue to multiply. It will become more and more important to provide the best technical services to present an effective front in this continuous battle against occupational diseases.

ADMINISTRATION

This item, representing about 4 percent of the estimate, covers housekeeping services and executive supervision. It also provides for three men to work on special engineering problems, problems that affect all of the divisions and hence can better be accomplished at a central point.

Water Pollution Control Act

Mr. Fogarty. Will you explain briefly for the benefit of the committee when Public Law 845 was enacted and what its contents or provisions are?

Mr. Hollis. Yes, sir. Public Law 845, the Water Pollution Control Act, was enacted in the closing hours of the Eightieth Congress. In the act, Congress set forth in section 1 the fundamental policy that governs the conduct of the national water-pollution-control program. That policy was that Congress recognized and preserved the primary right, responsibility, and authority of States to carry out water-pollution-control measures.

Having set that principle as a fundamental policy the Congress then prescribed certain Federal aids to States in an effort to correct the ever-increasing water pollution of our national streams.

The assistance activities included development of comprehensive water-pollution-control programs. The act charged the Surgeon General of the Public Health Service with the responsibility of developing, in cooperation with States, a comprehensive water-pollution-control program. This is a blueprint of what corrective measures are needed in water pollution to meet the established uses of streams. Water pollution is a complicated subject in that you can't merely require a degree of treatment. You have to require sufficient treatment to protect the stream for its established uses, the established uses that are to be made of the water. The blueprint accordingly was to set up the comprehensive programs, based on the uses, which uses were to be worked out with the States and in cooperation between the States.

Primarily the reason of the Federal Government in the water-pollution program is most of our major problems are interstate in character. Pollution entering a stream at any point affects the stream throughout its course. This phase of the program is moving along in good shape.

The second objective was to promote uniform State legislation. As we interpret the intent of the Congress, it was not to develop a law that all the States would adopt; but rather it was to develop a set of principles, uniform in character, that would be desirable effectively to control pollution. That is what has been done in cooperation with the States, and the suggested law has now been adopted by the Council of State Governments, and published.

Another objective was one of working out corrective measures for industrial wastes for which there was no known method of treatment. In the United States insofar as organic wastes are concerned, we know what to do and how to do it. Correction of pollution is only a question of economics insofar as municipal sewage-treatment problems are concerned. In terms of industrial wastes, there are many types of industrial wastes that are not given to simple or practical methods of treatment and that was one of the objectives that Congress set out for us to do.

As you will recall, Mr. Chairman, this type of research has been modest because of limitations of the appropriation. We proceeded with the development of the industrial task committee to supplement our research efforts. I would be glad to detail it out, if you wish.

The other objectives had to do with financial assistance to the States; a million dollars to be divided equitably between the States was authorized to be appropriated annually. Also 22½ million was authorized to be appropriated annually for loans to cities for construction of waste treatment, and other financial provisions. If you wish them spelled out I will be glad to do it.

ALLOCATION OF WATER-POLLUTION GRANT FUNDS

Mr. FOGARTY. You say this 1 million is to be distributed on an equitable basis. What kind of a basis is that? How is it allocated?

Mr. HOLLIS. We have allocated it, Mr. Chairman, on a straight formula, based on population and financial need. The committee may be interested that we felt at first the factor of the problem of pollution should be used in the formula, and we attempted to work such a formula out, considering the industrial production of States, and we found that if we worked out a formula on that basis that it was only about 2 percent off of the population's financial need formula. We also considered the number of people that worked in industry as criteria for determining need. That, again, was only about 2 percent off, so after testing out practical methods we came back to the straight basis of population and financial need.

We did feel that if the amount of a million dollars that was to be apportioned to each State was to mean anything, it should at least provide one man to the State, and hence, because of some of the sparsely settled States we set up our formula on a basis of $8,000 basic grant to all States, plus their mathematical apportionment on a basis of the formula.

ENGINEERING, SANITATION, AND INDUSTRIAL HYGIENE

FUNDS AVAILABLE, 1951 AND 1952

Mr. FOGARTY. You had available $3,670,030 in 1951 minus nonrecurring items and leases taken over by General Services of $111,947,

which left you $3,558,083, and you are asking for $3,800,000, or an increase of $241,917 and 27 positions.

WATER-POLLUTION PROGRAM PERSONNEL

Now in the water-pollution-control program you show an increase of $22,976. You have 235 people working in water-pollution control. What do they do principally?

Mr. HOLLIS. These personnel make up three distinct groups. First, the headquarters group.

Mr. FOGARTY. Where is that, in Cincinnati?

Mr. HOLLIS. They are located here in Washington. That group includes the statisticians that are compiling basic data as it comes in from the field. That is 60 positions in the headquarters here in Washington.

RIVER-BASIN OFFICES

The next big group are the river-basin offices. We have the country divided into 10 major watershed areas. For these, there are 88 positions.

Mr. FOGARTY. What do they do? What areas have you men working in now?

Mr. HOLLIS. We are working all over the United States, with the country divided into 10 major regions. For example, Boston, Mass., serves the New England area down to the New York watershed. The headquarters for that region is in Boston. New York is next, serving the New York-upper Pennsylvania area; Atlanta serves the southeastern drainage basin area.

Mr. FOGARTY. What are those people doing now?

Mr. HOLLIS. That is the group that are out collecting all the data on sources of pollution, both in terms of location of where the pollution enters the streams and the type of pollution. That is the initial basic data that is being used to develop the blueprint of corrective measures.

In other words, after we complete the compilation of these data we will have the degree of pollution entering the stream, and the condition of the stream, based on all the information that is available in the United States.

Our personnel are not going from industry to industry and town to town, because most of these data are already in the files of State health departments. Incidentally, of the million-dollar grant that has been made to the States, some of that is used by the States in assembling these data. They do go out in a few instances to pick up special technical data on some industries.

Basin personnel also work up the initial reports that come in on each watershed.

CINCINNATI LABORATORY—WATER POLLUTION

Mr. FOGARTY. What is your third group?

Mr. HOLLIS. The third group is at the environmental health center.

Mr. FOGARTY. That is at Cincinnati?

Mr. HOLLIS. That is at Cincinnati. There are 87 positions involved on that work. That doesn't mean we have 87 men on research. Cincinnati is the center on water pollution for our technical research,

and also for our field investigation. As a matter of fact, the greater part of the 87 are out on mobile laboratories, filling in gaps in the knowledge in the highly industrialized areas.

Mr. FOGARTY. I will insert page 27 of the justifications in the record at this point.

(The information is as follows:)

Summary outline of the program development and reporting aspects of the work

Major program items	Fiscal year 1950	Fiscal year 1951	Fiscal year 1952
Basic data collection—Cooperation with State and interstate agencies.	For initial phase, only data readily available has been gathered—60 percent completed.	Complete initial phase. Revise to provide more complete data.	Revise, bring up to date and fill gaps in data, and revise annually thereafter.
National summary report.	Started in April. This report will provide a brief Nation-wide summary of water-pollution conditions supported by available basic data.	To be completed Feb. 15, and published shortly thereafter. Also, 15 regional summary reports will be completed and published.	
Development of comprehensive programs (260 subbasins).	Initiated through collection of basic data. First draft of 12 program reports completed.	Complete 75 of a total of 260 programs and issue technical reports thereon. These will include 80 metropolitan centers of approximately 164 which might become critical from standpoint of war mobilization.	Complete remaining 185 programs and issue technical reports thereon.
Revision and extension of comprehensive programs.	----------	Revision initiated through collection of more complete data.	Initiate revision and supplementation of programs and reports previously completed. Will be continued following year.
Simplified reports for general distribution to stimulate community action.	----------	Complete and print 35 of a total of 105. Two or more subbasins will usually be covered by each report.	Complete and print 35 of the remaining 70 reports. Will be continued the following year.

NEW POSITIONS IN RADIOLOGICAL PROGRAM

Mr. FOGARTY. Your radiological program is where you show practically your entire increase, 27 positions, and a cost of $200,338. What is the need for those 27 positions?

Mr. HOLLIS. Mr. Chairman, 16 of those positions are in connection with the water-decontamination study at the Oak Ridge Laboratory. Four of the positions are in connection with the waste disposal studies at Los Alamos. There is one additional position for the Columbia River investigation. That is the third objective in our research, that of observing the behavior of radioactivity in the water supply.

The other six positions are for training, in the training program at Cincinnati. This is the staff that will carry out the radiological training facility in Cincinnati.

ACTIVITIES UNDER MILK AND FOOD SANITATION

Mr. FOGARTY. Now on milk and food sanitation you have 120 people working. What are you doing in milk sanitation?

Mr. HOLLIS. With your permission, sir, may I break that personnel down first?

Mr. FOGARTY. Yes.

Mr. HOLLIS. That title is a little misleading in the sense that it does not reflect this item to include the research group in Cincinnati as well as those on basic environmental health. For example, of the 120 positions, 88 are for general sanitation activities. For the environmental health center in Cincinnati, 49 positions are for basic research; on milk and food research work, in Cincinnati, 8, and at the shellfish laboratory at Woods Hole, 5. Milk and food is under our general sanitation activities, and includes the total of 36 of the 58 general sanitation personnel. In other words, there are 36 of the 120 total personnel included in milk and food sanitation work. Of the 38, 8 are departmental and 28 are in the field.

More specifically on the question of what we do on milk and food, these men are attached to our 10 regional offices and are the personnel that render the consultation service to the States in connection with the standard ordinance, promotion of the standard ordinance, the assistance to the States in developing better milk-control techniques, better State programs, working with new industrial developments that come out, particularly in milk processing, testing new principles under field conditions, and also attempting to meet the request for information for interestate shipment of milk.

SANITATION OF INTERSTATE CARRIERS

Mr. FOGARTY. In sanitation of land, water and air carrier, you have 88 positions. What do they do?

Mr. HOLLIS. Of the 88 positions, 7 are in the headquarters and 81 are in the field. I might break down the type of people first. Five are dining car inspectors; 21 are vessel inspectors; 39 are professional personnel, largely engineers that do the professional work incidental to the interstate carrier construction and the watering point, sanitation, and so forth, and 23 are clerical personnel.

There is a heavy clerical load in connection with the certification program because the certificates are issued to the industries for display on the common carrier, as you no doubt have noticed.

The purpose of the interstate carrier program is to protect the traveling public. Since they are interstate they are not subject to the jurisdiction of individual States.

We utilize the State health machinery to the extent of the source of water supply, for example. If the State has approved a public water supply, we will accept that approval of water-supply source so that our job then is limited to the facilities at the watering point itself; that is, on the interstate carrier property. Since servicing facilities are outside generally, and involved with freezing, there are such problems as designing and developing frostproof boxes that you might have noticed along the tracks at stations, the method of hose connections, and methods to meet the practical problem of speed required to water trains between stops. Problems of protective devices for the hose and on the nozzle, protection of the plumbing structure itself on the trains, and so forth.

Ships are even more involved because in addition to the normal sanitary facilities we have rat-proofing, which is quite complicated. In summary the program is designed as a continuing activity of inspection to safeguard the sanitation of interstate carriers.

Mr. FOGARTY. Industrial Hygiene; you have 112 positions.

Mr. HOLLIS. Mr. Chairman, I wonder if I might introduce Mr. Flanagan? Mr. Flanagan is Assistant Chief of the Industrial Hygiene Division.

Mr. FOGARTY. Tell us who these people are, Mr. Flanagan, and what they are doing.

Mr. FLANAGAN. Yes, sir. I can. Do you want the distribution?

Mr. FOGARTY. Yes; the same as Mr. Hollis has given.

Mr. FLANAGAN. The Industrial Hygiene Division is operating at the present time in Washington, out of our field headquarters in Cincinnati and out of our Salt Lake City field station. We actually have 96 people on the payroll at the present time. That breaks down into a total of 64 professional personnel and 32 clerical. Distribution of people: 8 at Salt Lake City field station, 36 at Cincinnati field headquarters; there is one position in training at Columbia University, specializing in dermatology. There are four, I believe they are all engineers, on State assignment in various sections of the country. There is an officer initiating an industrial nursing training and educational program at Yale University and the remaining 46 are here in Washington.

Looking at it from a functional point of view in the organization of the division, we have what we call our clinical investigation branch here in Washington, with all of the physicians, dentists, nurses, other than the nurse that I indicated, and at Cincinnati, we have what we call the environmental investigations branch comprising the field engineers, chemists, toxicologists, and other personnel of the same type to carry out field investigations.

There is a statistical group here in Washington in addition to the others that I mentioned.

Mr. FOGARTY. What are the first ones you mentioned in Washington doing?

Mr. FLANAGAN. The operations of this division require very close coordination between the people who are here in Washington and the people who are in Cincinnati. In any field investigation, and we can cite the investigation of the chromate industry at the present time, it is necessary to have very close coordination between the physician and nurses working out of Washington, and the engineers working out of Cincinnati, and all of their activities have to be backed up by very close coordination with the laboratory personnel that is stationed in Cincinnati.

Mr. FOGARTY. Why should not they be out in the laboratories.

Mr. FLANAGAN. Whom, sir?

Mr. FOGARTY. These people in Washington.

Mr. FLANAGAN. They are not laboratory personnel. From the administrative point of view, I think we would probably have easier operation if this Washington group was stationed in Cincinnati.

Mr. FOGARTY. They do not have any room for them?

Mr. FLANAGAN. No; not at the present time. We went out there just within, I don't know how long ago it was, a year or so ago?

Mr. HOLLIS. Within the year past we completed the shift of certain of the field personnel from Washington to Cincinnati, and a further shift will take place as we develop facilities in Cincinnati.

SALT LAKE FIELD STATION WORK

Mr. FLANAGAN. This Salt Lake field station that I mentioned with only eight personnel there, six of whom are professional people, was established to provide better service on industrial health problems to the States in the agency regions 9 and 10, and currently that station is the one that is doing most of the field work in connection with the investigation.

Mr. FOGARTY. Where are 9 and 10?

Mr. HOLLIS. Western United States.

Mr. FOGARTY. Why should that be done?

Mr. FLANAGAN. Just because there were a lot of problems cropping up in that section and to avoid excess costs in transportation and travel, and so on. We thought that possibly we would be able to afford the same services much more cheaply by that sort of an arrangement. The University of Utah at that time was also interested in establishing a liason with this division to get some teaching for their medical students, particularly in the field of industrial hygiene, and this staff assists in that type of work at the University of Utah.

Mr. STEPHENS. Region 9 is Denver and 10 is San Francisco, serving both.

Mr. FOGARTY. Just what are these people doing out there now? How many do you have there?

Mr. FLANAGAN. In that particular field station there are eight people.

Mr. FOGARTY. Specifically what are they doing?

Mr. FLANAGAN. They are engaged, for the most part, in investigation of the uranium mining and milling industries located in what is called the Colorado Plateau. That is a rather indefinable area comprising parts of Arizona, Colorado, New Mexico, and Utah. These industries for the most part are relatively small. They employ approximately 2,000 workers. There are, I believe, six different operating companies that are involved.

Mr. FOGARTY. What is the problem?

Mr. FLANAGAN. The problem in that particular industry is a very severe exposure to radon gas and ionizing radiation. We are very closely working with the AEC on this. They are giving services to us from their Los Alamos station in the analysis of urine samples that are collected from these workers; the Naval Radiological Defense Laboratory in San Francisco has been doing uranium determinations which we were not set up to do at the time this study was started during the last year, and there has also been a very close tie-in in the planning and conduct of the study with the Division of Biology and Medicine of the AEC here in Washington.

The preliminary sampling that we have carried out, and the analysis of the radon gas collected (and incidentally, that analysis work is done by the National Bureau of Standards, which is one of the two places in the country where you can have that sort of work done), indicate that the exposures are running many thousands of times higher than the currently accepted safe limit for that particular type of exposure.

Mr. FOGARTY. How many lives have been lost?

Mr. FLANAGAN. There have been no lives lost now. One of the reasons why we are concerned about it has been the foreign experience.

In certain similar industries in similar mines in Germany and Czechoslovakia, there has been approximately 44 percent mortality from lung cancer in workers doing similar work. No clinical signs have shown up in these people. The industry out in that particular area, I believe, got going some time during the calendar year of 1948 and started out with only four to six hundred people. At the present time it is up to 2,000. It has also changed from what you might call the old pick-and-shovel type of operation to a mechanized industry with mines which are getting far below ground, hitting hot, humid conditions, conditions where it is extremely difficult to control the dusts and the gases, and the radiations that do come out of these uranium lodes.

That study is a study that will continue along for quite a time. It will have to, because of its importance to the whole national defense program, and becasue of what is going to be a high cost to those industries in installing effective ventilation systems, and I believe that it is also pointing up another problem, which I think would be described as a reevaluation of the limit which was set for radon gas, and I think the Division of Biology and Medicine of the AEC has already gone into that.

I would like to say just one more thing, if I may, on that.

The people in the field at the Salt Lake station, of course, are being assisted by whatever laboratory personnel is necessary at our Cincinnati station in the analytical phases of the work.

OBJECTIVES OF WATER-POLLUTION CONTROL PROGRAM

Mr. FOGARTY. Mr. Hollis, on this water-pollution program, will you go into some of the background of that please?

Mr. HOLLIS. Mr. Chairman, as to our time schedule, completion of the comprehensive program——

Mr. FOGARTY. You are charged by Congress in Public Law 845 to get up this comprehensive over-all program?

Mr. HOLLIS. That is correct.

Mr. FOGARTY. In cooperation with the States?

Mr. HOLLIS. That is one of the specific responsibilities.

Mr. FOGARTY. Has that program been set up?

Mr. HOLLIS. All the initial data have been collected and will be analyzed and published by July of this year. There will be gaps of course which will have to be filled by laboratory determinations.

Mr. FOGARTY. What happens after they have been published?

Mr. HOLLIS. The next step, knowing what the pollution problem is, will be for the States and interstate agencies that have the responsibility for control to determine what uses they wish to make, or plan to make of the streams. On the basis of these uses, it will be a relatively simple mathematical calculation to determine the degree of treatment that will be required at the sources of pollution to meet these needs.

Mr. FOGARTY. What do you mean by uses?

Mr. HOLLIS. Industrial water supply, public water supplies, fish and wildlife conservation, agricultural uses. irrigation water, stock watering ponds, recreational uses, and the like.

Mr. FOGARTY. And then what?

Mr. HOLLIS. On the basis of the comprehensive programs then the States are to proceed with their responsibility, which is to effect the treatment of sewage and waste at the sources of pollution. This responsibility was left in their hands.

A complication is arising because we can't predict what the manpower and materials situation is going to be in this type of construction. In other words, what will be the apportionment of critical materials that can go into sewage-treatment works. It is for that reason that we shifted our initial plan slightly so that we will come out with a blueprint under the three categories. First, what must be done to protect municipal and industrial water supplies as category 1, something that has to be done; second, what treatment will be required to protect these broader uses; and third, the ideal treatment to develop the stream for its total maximum use.

Mr. FOGARTY. That will be primarily the responsibility of the States?

Mr. HOLLIS. Primarily the responsibility of the States; yes, sir.

Mr. FOGARTY. You have come up with uniform legislation for the States. Will the States have to enact that legislation?

Mr. HOLLIS. No, sir; definitely not. It is a suggested act, actually worked up with the States themselves. This draft was in preparation 2 years.

Mr. FOGARTY. It has been adopted by representatives of the States?

Mr. HOLLIS. We had a special committee representing the States—the conference of State sanitary engineers, for example; also the State health officers reviewed it. We had industry look at it and, of course, the legal groups, and at that stage we presented it to the conference of State governments for their review. It came up at the meeting last fall and they adopted it, endorsed it, and set it up in their own publication.

This sample here happens to be a release of our own, as a recommended law.

The purpose is to promote legislation uniform in principle. Necessarily, water pollution acts will vary from State to State in specifics. For example, in Oklahoma, in the oil-field area, they have a special problem of oil-brine waste, and they have in Oklahoma certain basic acts controlling the production and handling of oil. In other States there are other specifics that have to be given attention, but this sets up the basic principles, and we are hopeful of getting all the States to adopt these basic principles.

OVER-ALL COST OF A POLLUTION-ABATEMENT PROGRAM

Mr. FOGARTY. What do you estimate the over-all Federal cost of this program will be?

Mr. HOLLIS. For the correction program?

Mr. FOGARTY. Yes.

Mr. HOLLIS. We have gone far enough to say with reasonable assurance that it is going to cost between 8 and 12 billion dollars to correct water pollution in the United States.

Mr. FOGARTY. Eight and twelve billion?

Mr. HOLLIS. Eight to twelve billion dollars. The reason there is a variation between eight and twelve is that the cost of sewage treat-

ment, for primary treatment, is roughly $20,000 per thousand population. This will provide a 40-percent reduction in the polluting effect of such wastes.

Mr. FOGARTY. What is that going to cost the Federal Government?

Mr. HOLLIS. The Federal Government, without action of Congress——

Mr. FOGARTY. No; my question to you originally was how much will this over-all program cost the Federal Government.

Mr. HOLLIS. Well, the correction——

Mr. FOGARTY. Water-pollution-abatement program.

Mr. HOLLIS. If I might answer by analyzing the present act, under Public Law 845, the Congress authorized only 22½ million per year through the life of the act, as low-interest loans for financing corrective measures. Actually none of that has ever been appropriated, so thus far this billion dollars that has been expended since 1947, for example, was all expended by cities, by the municipalities themselves, and none of it from the Federal Government.

The 500 plants that were installed by industry were financed by the industries themselves; none by the Federal Government.

Mr. HARLOW. I think you should answer, Mr. Hollis, Mr. Fogarty's question by telling how much we think we will ask him to appropriate over the life of this act for our own activity.

Mr. FOGARTY. That is right.

Mr. HOLLIS. This particular act expires at the end of fiscal year 1953. For fiscal year 1953 we would like to have the authorized $2,000,000 for administration, research, completion of the comprehensive program work, and for other responsibilities that were assigned to the Public Health Service. Beyond fiscal year 1953 there will have to be a determination by Congress as to what they wish done beyond that point. Congress will have our detailed data; they will have the President's Water Policy Commission's report to consider, and so forth.

Mr. FOGARTY. Mr. Denton?

ALLOCATION OF GRANT-IN-AID FUNDS, 1951

Mr. DENTON. I do not understand this million-dollar grant yet. I notice over in this table you give certain moneys to States.

Mr. FOGARTY. Let us put that table in the record at this point.

(The information referred to is as follows:)

Allocation of grant-in-aid funds for water pollution control, fiscal year 1951

State or Territory	Allocation	State or Territory	Allocation
Alabama	$19,500	New Jersey	$18,000
Arizona	10,100	New Mexico	9,900
Arkansas	16,400	New York	34,800
California	28,400	North Carolina	22,600
Colorado	11,000	North Dakota	9,400
Connecticut	12,000	Ohio	25,900
Delaware	8,600	Oklahoma	16,000
District of Columbia	9,800	Oregon	12,100
Florida	14,900	Pennsylvania	33,700
Georgia	19,600	Rhode Island	9,700
Idaho	9,600	South Carolina	16,300
Illinois	25,100	South Dakota	9,500
Indiana	18,100	Tennessee	19,400
Iowa	15,100	Texas	29,900
Kansas	13,100	Utah	9,900
Kentucky	19,300	Vermont	9,100
Louisiana	17,300	Virginia	17,300
Maine	10,500	Washington	13,400
Maryland	12,800	West Virginia	14,300
Massachusetts	18,500	Wisconsin	16,200
Michigan	22,400	Wyoming	8,700
Minnesota	16,200	Alaska	8,700
Mississippi	18,600	Hawaii	9,400
Missouri	18,700	Puerto Rico	18,900
Montana	9,100	Virgin Islands	8,100
Nebraska	11,300	Interstate agencies and commissions	175,000
Nevada	8,300		
New Hampshire	9,500	Total	1,000,000

Mr. DENTON. What does the State use that money for?

Mr. HOLLIS. That money, sir, is to aid the States in their own promotional water-pollution-control activities.

Mr. DENTON. You don't loan it to anybody, for instance, to build a sewage-disposal plant or anything like that?

Mr. HOLLIS. No, sir; it goes to the State water-pollution authority, whatever that authority may be.

Mr. DENTON. It pays part of the States' salaries on that?

Mr. HOLLIS. They can put on additional people, can do specific types of research and investigations that are peculiar to that State. The only limitation that the Congress placed on it was that it was to be used to promote corrective measures of complicated industrial waste, so it is earmarked in the sense that it has to be used——

PLANNED PROGRAMS TO CONTROL POLLUTION

Mr. DENTON. I live on the Ohio River in Indiana. This is a big problem with us. It does not do us much good to build a sewage-disposal plant if people up above us on the other side of the river do not.

Mr. FOGARTY. That is what this law was passed for.

Mr. DENTON. I don't see how this law solves it in any way.

Mr. HOLLIS. It doesn't solve it, but it does this, which has never been done before: The law provides the means for developing a total picture of pollution by watersheds, regardless of State lines, and it sets up the machinery by which we can work with States and interstate groups—the Ohio River Interstate Commission, for example–and

can get the States together, and promote agreement on water uses, and agree to protect the streams for such uses, then——

Mr. DENTON. Take the Ohio River. There is not much question what it is used for. It is used for drinking water, industrial purposes, and so forth.

Mr. HOLLIS. Also the Ohio is used, across from Cincinnati, for recreation.

Mr. DENTON. Yes; it has those purposes; but the problem is that every State on the river must carry out this program to make it of any value.

Mr. HOLLIS. That is right.

Mr. FOGARTY. You see before the passage of this law that would be almost physically impossible, but it is the hope with the passage of this law that this comprehensive over-all program for the 48 States would take care of the situation like that, eventually.

Mr. DENTON. I don't see how. For instance, say Indiana agreed to it and say Kentucky would not. There is no use of Indiana going ahead.

Mr. HOLLIS. That is a good point, sir. I think in that case, for example the Ohio River Commission has authority to act, to correct its problem, putting in waste-treatment works costing some $80 million. At the headwaters, Pittsburgh as about $120 million treatment under construction to take care of its problem.

Mr. DENTON. Of course that river has all been dammed up and you do not have the flow you did have, especially in warm weather, with the low flow of water.

Mr. FOGARTY. I can give one example, Mr. Denton, on that. In Rhode Island we are spending quite a large sum of money on sewage-disposal plants and sewage systems.

Mr. HOLLIS. Yes, sir.

Mr. FOGARTY. That is being expended by the State. When that program was first instituted about 3 years ago, it forced some of the cities around that system to appropriate money and establish sewage plants, because there was so much interest in the State for this program that the other cities were forced into that position where they went along and appropriated money.

Mr. DENTON. That is one State.

Mr. FOGARTY. Yes. I think the people in Kentucky would be forced into it, if Ohio was getting clean water and they are not. They would be influenced and be forced to take action.

Mr. DENTON. They said in Jeffersonville, under the State law, they have to build a sewage-disposal plant and they want to know what good that is going to do them if Louisville, across the river does not. I wanted to see how this worked out.

Mr. HOLLIS. I think one thing, sir, that has given impetus, is the fact that Congress recognized the hazard of increasing water pollution in the United States. In the history of pollution correction there are really two factions, two schools of thought: One is that until you have Federal control and order the remedial work done on an interstate basis on interstate streams, you won't correct it. Most States feel that the responsibility should remain in the State because ultimately, after you get the situation in balance, after you spend money and correct existing pollution, to protect established uses of the water,

a new industry comes in and might upset the balance again. So when you say "control pollution" ultimately you are saying that you will control expansion—particularly industrial growth—and the States felt that that largely was their responsibility.

Mr. DENTON. The State board of health, or whoever it is, has been ordering all these cities on the rivers to build sewage-disposal plants. There does not seem to be any enforcement machinery to it. It seems merely to be an order they issue.

Mr. HOLLIS. There is quite a bit of construction in the Ohio Basin. For example today; we were spending in 1950, in cities, at the rate of $377 million a year for correction of water pollution. This 8 to 12 billion I mentioned is about equally divided in terms of the expenditure required by cities, and expenditure required by industries. Hence, if we take 4 billion as the minimum requirement of cities to correct their problem on a basis of a 10-year program, that means that cities should expend at the rate of about $400 million a year; in other words, they are approaching that plateau. The impetus has been given and it is moving; it is building up every year.

Mr. DENTON. This is just to encourage them?

Mr. HOLLIS. That is all. The difficulty and tragedy of it is that we are faced now with the probability of a materials limitation, which limitation may slow down this trend.

SUSPENSION OF PROGRAM OF AID IN PLANNING SPECIFIC TREATMENT PROJECTS

Mr. DENTON. Let me ask you one other thing. In the committee print, page 49, there is $750,000 appropriated last year for grants for plan preparation, water pollution control and then $52,285 for the control. That came from General Services. What became of that? Did some other activity take over that work?

Mr. HOLLIS. No, sir; that happens to be under another appropriation, but I can answer the question now. That fund was impounded by the Bureau of the Budget, both the money for loans for preplanning, as well as the $52,285 administrative item.

Mr. DENTON. That was for cities to make plans for sewage disposal?

Mr. HOLLIS. Yes, sir.

Mr. DENTON. Or similar matters?

Mr. HOLLIS. None of that money was used. The reason it wasn't was that the materials uncertainty, if we had used it, we would have wanted to use it only in those areas where we knew we had to construct treatment to meet the realities of the day, but under the law, it had to be used on a more equitable apportionment. Accordingly, we interposed no objection to the Bureau of the Budget action.

Mr. FOGARTY. Mr. Schwabe?

Mr. SCHWABE. Mr. Chairman, this is a rather important subject, and one that seems to me we are more or less pioneering. I have several questions I want to ask.

Mr. FOGARTY. Do you want to go over to tomorrow morning?

Mr. SCHWABE. I wondered if you would not prefer to.

Mr. FOGARTY. All right. We will adjourn until 10 o'clock tomorrow morning.

FRIDAY, FEBRUARY 23, 1951.

ACTIVITIES IN DEVELOPING A COMPREHENSIVE POLLUTION ABATEMENT PLAN

Mr. FOGARTY. You may proceed, Mr. Schwabe.

Mr. SCHWABE. I listened to your testimony with a great deal of interest. It seems to me that I understood you correctly, roughly speaking, to say that you have divided the United States into 10 major regions or districts or watersheds, so to speak, areas which are drained by as many of our larger streams, so to speak. Is that about correct?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. And this division is based upon that watershed or drainage area rather than on anything else. Is that not correct?

Mr. HOLLIS. Yes, sir; considering the major approach and considering each watershed as an entity itself.

Mr. SCHWABE. I think we can readily appreciate why you do that. For instance, we have other divisions throughout the country, regions that have been set up for other purposes, which divisions are made arbitrarily but yours more or less has been a case where you have made subdivisions based upon natural drainage areas, so to speak, of the 10 major streams of the country, we will say.

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. Now at the beginning of the year Congress appropriated a sum of money, namely, $3,670,030, that was available during the current fiscal year, it is something less than that, for you to make surveys primarily. Is that correct? Could you break it down a little bit?

Mr. HILLIS. That $3,670,030 was the total appropriation for engineering, sanitation and industrial hygiene. Broken down into its various activities, the amount for the item of water pollution control was $1,434,024. With that money we are working here in the field of water pollution control——

Mr. SCHWABE. Yes; but confining ourselves to the subject of water pollution first, this $1,434,024 devoted to that activity, that activity consisted primarily of the surveys and studies made in the preparation of these 10 regions. Is that correct now?

Mr. HOLLIS. It included that. There are really four principal objectives and that was a main objective.

Mr. SCHWABE. You investigated it in four spots but it did to some extent cover the whole area?

Mr. HOLLIS. We covered the whole United States. The development of this survey material, the comprehensive program, covered the Nation. We used some of the fund to develop the suggested water pollution law which the States have available. Some of the funds went into research of industrial waste, including the development of the Industrial Waste Committee. Another element was the stimulation of the cities and industries to correct their own pollution problems in critical areas.

Mr. SCHWABE. Now, before we leave that, you stimulate the cities and States to conduct these programs and relieve themselves of the objectionable features that now prevail. In that connection how much encouragement did you give the cities and States, and localities

you might say, to believe that they could come to the Federal Government or to the Congress and ask for grants-in-aid, we will say, or Federal aid?

Mr. HOLLIS. I think you will find in the published statements of policy both by the Surgeon General and two papers that I had given before technical societies that, to the contrary we have stressed the point that this problem basically was one of the municipalities and industries to correct themselves. We have pointed out that Congress had authorized only $22,500,000 to be administered as low interest loans; that there were no provisions made for any grants for the industrial waste treatment work and as far as we knew there were no indications that there would be, and hence we felt that the cities and industries themselves should proceed with the correction.

Mr. SCHWABE. Did you go to the extent of warning them or I will put it another way, warning them not to rely on the Federal Government for assistance?

Mr. HOLLIS. We certainly pointed out strongly there was no provision in existence that there would be such assistance.

Mr. SCHWABE. Making these surveys and these studies that you have referred to, where did you begin with reference to water flow, at its source, or where it emptied into the ocean I will say or the Lakes or the Gulf?

Mr. HOLLIS. The original plan was to start with all the States in each of the watersheds. We actually started with the proper State officials. We pointed out what assistance was provided for under Public Law 845 in developing this blueprint.

At the start we attempted to get together all information in existence before proceeding to collect supplemental information. By and large the States have been working on this water pollution problem for decades and they have in their files a great deal of basic data, some including detailed laboratory studies. So the first step was to get all these data together and assemble them, and the next step we are in now is to compile these data in terms of the total problem of each major watershed.

Mr. SCHWABE. Do you have with you a regional map that we could look at?

Mr. HOLLIS. I am sorry, sir, I don't, not with me, but I can produce it.

Mr. SCHWABE. All right, then. Speaking from your personal familiarity with this program and the studies that you have made of the subdivisions of the regions will you kindly tell us the various watersheds constituting these general districts, hitting the high spots so to speak?

Mr. HOLLIS. Yes, sir; beginning with New England we have headquarters in Boston, and that office covers the entire New England area down to New York.

In New York City the watershed office comprises New York and Pennsylvania and Maryland, even taking in a small part of Virginia in that watershed divide.

The next natural watershed has headquarters at Atlanta which takes in the whole southeastern group of States up to the Tennessee River Basin. In other words, it takes up to the divide where the water drains into the Mississippi.

Next, Little Rock is the headquarters for the Arkansas, Red, and White River Basin group.

In Texas, at Dallas we have headquarters for the south-midwestern States of Texas and New Mexico.

In San Francisco the watershed office for the west coast area, covers all the Western States area excepting the Columbia River system.

There is another for the Mississippi and its tributaries. We will put it down in this way. We have one district covering the lower Mississippi, excluding the Ohio Valley.

Mr. SCHWABE. Which covers down to the confluence of the Ohio and the Mississippi?

Mr. HOLLIS. Yes, and the Missouri we have set up as an entity in itself because as you know there is now a multi-billion-dollar water program under way on the Missouri and while it is part of the total Mississippi system it is large enough itself—as a matter of fact, it covers about one-sixth of our land area and it is a major entity; and then the upper Mississippi above the confluence of the Ohio and the Mississippi up all the way to the headquarters in Minnesota; the Ohio River watershed, and then the tenth, the Great Lakes Basin.

Mr. SCHWABE. All right. Then you have told us, as a matter of fact, what material you have received from the States and local sources applicable to these several watersheds. In some instances like you mentioned in the case of Virginia it probably will be divided with part of it in one region and part of it in another and the same thing is true in regard to Tennessee.

Mr. HOLLIS. Actually, that is true; yes, sir.

Mr. SCHWABE. That is due to the contour and the drainage. Now again I refer to the study. In making your study do you start at the source where the water falls upon the watershed primarily or do you start down below and make your compilation and conclusions as a result from those studies?

Mr. HOLLIS. In computing the correction plan you start at the headwaters and work down. In other words, once we get all these data together to devise the blueprint of correction, the obvious starting point is at the headwaters. Pollution that enters a stream at any point affects all other points downstream since the pollution moves down until it becomes stabilized.

Mr. SCHWABE. You have heard said many times by sanitary engineers and students of sanitation that stream pollution tends to clear itself with the flow of water and in some instances within a few miles and in other instances, of course over a large flow and a longer flow. Is that right?

Mr. HOLLIS. That is an extremely important point in this water pollution plan. In other words we have devised formula for computing, even without going into detailed laboratory studies, formula for computing the self-purification phenomena of streams.

Mr. SCHWABE. Nature has done a lot in that direction and must be recognized and that is what I am trying to get at.

Mr. HOLLIS. That is right, sir, and it is interesting that present methods of sewage treatment are nothing more than taking exactly what nature does in that stream and confining it in a treatment plant right in the city itself. So all we have done is borrowed laws from nature and applied them in a treatment plant right in the city itself.

Mr. SCHWABE. It is wonderful what nature has done and can do if you give it an opportunity.

Mr. HOLLIS. Yes; nature has been very effective in stream pollution and may I point out that that question which you have raised is an extremely important point because the cost of the total correction of all pollution in the United States is an extremely high figure. It would run into approximately $20,000,000. Obviously it goes beyond practical limits. So what we are attempting to do here is to treat the sewage and waste only to the point where nature will take care of the remainder. This chart [indicating] illustrates it very well.

You can get a 40 percent reduction in the polluting effect of the waste at a cost of $20,000 per 1,000 population or $20 per person. Now if you want enough treatment to have an 80 percent reduction in the polluting effect of the wastes, that can be effected at a cost of $42 per person. However if you further insist, in highly polluted areas, on a 95 percent reduction in the polluting effect of the wastes it will cost you $80 per person, or twice what it costs to effect at 80 percent reduction. In other words, that additional 15 percent reduction or reducing the polluting effect of the waste from 80 percent to 95 percent or a 15 percent reduction will cost as much as the previous 80 percent reduction.

Our point is that Congress has clearly set up the responsibility for sewage pollution control to rest with the State. Then, if we can, we want to put these data out for the States to use.

Mr. SCHWABE. And you get most of your data from the States?

Mr. HOLLIS. Yes; we get most of our data from the States. We get the data from the States and then we analyze it on an interstate basis to see what can be done.

Mr. SCHWABE. And then you are becoming a clearing house. That is what it amounts to.

Mr. HOLLIS. That is basically what it is plus where there are gaps in data on streams, we use our laboratories to aid the States. However, it is up to the people themselves to decide where they want to "buy in". In other words, how much recovery do they want in their streams? Do they wish the stream purified to such an extent that it would become practically pure or do they want nature to do as much as possible and then have man supplement nature by a treatment which is down here in this lower figure [indicating]?

Mr. SCHWABE. Here is your difficulty. Upstream we will say there is a sewage disposal outlet and down below that there is the intake for the municipal water supply. Now the people above are affected directly of course. So they say, "Now, we have gone to the expense of reducing this danger, eliminating pollution to a certain percentage, which we think is standard and sufficient." The people below say, "We want more of it." Now, there is not any way to force that upon them as far as that is concerned and under this act or under your authority, unless you do show that that results in what might be a pestilence or a danger to health, to a very serious extent on the people below that point you could not do anything. Is that not correct?

Mr. HOLLIS. There are really two points. If it is an interstate stream——

Mr. SCHWABE. Yes; let us take both of them.

Mr. HOLLIS. First, the case of interstate streams. For example, if Cincinnati, Ohio, was polluting the Ohio River to the extent that towns in Kentucky and Illinois were affected, under the law, Public

Law 845, Congress has authorized the set-up of machinery for the Federal Government to step in, following an orderly procedure of hearings, of surveys and of working with the various States. If that fails, we can institute action in the Federal court. The second case would be an intrastate matter where it is all within a State. Now if that happens——

Mr. SCHWABE. Like the Missouri River flowing through the State of Missouri, for instance.

Mr. HOLLIS. Yes, sir; assuming two places in the same State, then that becomes a State problem and the State authorities have the authority to act. One of the difficulties is in regard to the laws of our States. In 25 States to be exact, the trouble is that the State law is not clear as to what State agency does have the authority. It is divided between two and three State agencies and that is one of the reasons for this suggested law. In many States, it is clear what State department has authority to act within the State. The main problem comes in the interstate area.

Mr. SCHWABE. That basic law that you have been talking about here, is that the one enacted in 1948, I believe?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. And it only covers this matter of water pollution control, does it not?

Mr. HOLLIS. That is all, sir.

Mr. SCHWABE. These other activities on which you have been spending a part of your money such as radiological surveys, milk pollution, sanitation, and other activities in sanitation and interstate land, air and water carriers and industrial hygiene are extra activities, so to speak, not covered by this law that provided for water pollution control under the act of 1948. Is that not correct?

Mr. HOLLIS. That is right, sir.

Mr. SCHWABE. May I ask you to tell this committee your authority or the basis of your authority for proceeding in these other fields and using funds that were appropriated for the carrying out of the provisions of the 1948 act?

Mr. HOLLIS. Yes, sir; prior to the fiscal year 1949, Mr. Schwabe, all these activities were carried under separate appropriations or were part of separate appropriations.

Mr. SCHWABE. Under the general law authorizing the Surgeon General of the Public Health Service to take action in such instances; is that right?

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. But not under this other law at all—the 1948 act did not cover it?

Mr. HOLLIS. It had no relation to it.

Mr. SCHWABE. You grouped those items together with the activities provided for under the act of 1948—water pollution control. Is that right?

Mr. HOLLIS. I might say, sir, that we did that at the suggestion of this committee. It was suggested that we group these related functions, because they were in so many different appropriations. This committee suggested that it was hard to follow just what was included in this broad field of environmental health. It was suggested then that we take all these related programs together with that basic authority and develop this one appropriation of engineering sanitation

and industrial hygiene. The language under which we operate of course refers not only to Public Law 845, but also to the water-pollution control reference in Public Law 410, which is a Public Health Service Act. Also within Public Law 410 other appropriations for activities which apply. I shall be glad to read them to you if you like.

Mr. SCHWABE. Most all the scope of those activities is analogous to what we might say is interstate operations and interstate commerce and things that deal with interstate commerce. Is that not correct?

Mr. HOLLIS. Right; yes, sir.

Mr. SCHWABE. It is analogous to those situations?

Mr. HOLLIS. Yes, sir.

ENGINEERING, SANITATION, AND INDUSTRIAL HYGIENE

MILK SANITATION WORK

Mr. SCHWABE. Now with reference to milk and food sanitation and other general sanitation activities, where have you accomplished much in that respect over and above the State and the local regulations that control in policing in the respective areas?

Mr. HOLLIS. May I go back, Mr. Schwabe, just a little in the background?

Mr. SCHWABE. Sure, I am not trying to cut you off anywhere. I am asking you these questions because I want information.

Mr. HOLLIS. That particular activity is one that I feel very deeply. In 1926 when we were having outbreaks of milk-borne diseases—typhoid and other diseases in the field of milk—the Public Health Service was called into that activity. Almost simultaneously, you may recall, in the late twenties, we were having outbreaks of disease traceable to shellfish consumption and so we got into that activity.

Fundamentally, even in 1926 the Public Health Service felt that ultimately these problems had to be handled by the States and local authorities. It was at the point where radiological health is today. Radiological health is a new science and we are sticking to that proven formula that ultimately the health problems of the atomic age must be assumed by the States and local authorities. But now back to milk:

The first effort of the Public Health Service was to develop standards, some criteria, to aid the States and local people in developing sanitary control programs. Without going to the details, we have evolved definite standards. We have evolved a Standard Milk Ordinance and Code, a device that has been accepted by 34 States as State standards and by hundreds of cities that have adopted it as city standards and by many counties throughout the country.

That was one approach developed by us. Incidentally this was developed by a committee representing State health departments, Department of Agriculture, and the milk industry. The purpose of this development was a practical means of improving the quality of milk. When they have highly technical problems that are beyond local resources they refer them to us.

Another approach was to develop practical ways of processing milk. Take the pasteurization plant, for example. As late as the early twenties, pasteurization of milk was by no means a usual procedure. It was somewhat an exception to have pasteurized milk. Pasteurization was just beginning to evolve as common practice. One difficulty was the cost. Another problem was to design pasteurization equip-

ment that could be easily and quickly cleaned. In the early thirties, the Public Health Service had a very large segment of its appropriation utilized for research into pasteurization equipment for milk and we believe we made quite a contribution in that field. Since then, of course, that job is finished and that particular research is over.

Mr. SCHWABE. That is right. You did that 15 to 20 years ago. That is my point, that you practically completed your work along that line and in practically every city in this country today there are ordinances promulgated under State laws authorizing such enactment and providing for inspections at the source of production and requiring grade A dairies, with all that goes with it, in order that there may be sanitation from the time the milk comes from the cow until it is consumed by the consumer. Isn't that true?

Mr. HOLLIS. That is true.

Mr. SCHWABE. And the problem has been whipped and standards perfected that are now almost universally accepted. Isn't that true? And the producer cannot take milk into, or ship it into a consuming area as a rule without he first shall have had his dairy inspected and his equipment inspected and his method of cooling, handling, processing, and delivering to the consumer. Isn't that about right now?

Mr. HOLLIS. There are no requirements on interstate shipment of milk.

Mr. SCHWABE. But you can come in on interstate shipment of milk very quickly, if necessary.

Mr. HOLLIS. We can on proven cases; yes, sir. If we suspect a source of contamination——

Mr. SCHWABE. That is right; you don't want to get in unless there is suspected danger, do you?

Mr. HOLLIS. Well, there, again, is the basic philosophy. We believe that we are not policemen, that we should not function as a regulatory control.

Mr. SCHWABE. God hope you never will.

That is all I have to say about that. I don't think you should do it, and I am glad to hear you say you don't want to.

Mr. HOLLIS. We don't want to do so, if the State programs can be strengthened so that they do the job themselves. Then there is no point in our getting in the field at all. In regard to the appropriation, the amount of money actually expended on milk amounts to the cost of six people throughout the whole United States, so we are not talking about a whole lot of people. But I would like to pursue, if I may——

Mr. SCHWABE (interposing). Just a minute. You said "six people," but you have an item of $683,000 in the 1952 request, haven't you, covering 120 positions, which is the same as you asked for last year?

Mr. HOLLIS. Again, if I might break down these figures and then go back to milk—that 120 positions—you see, this activity covers milk and food and other general sanitation; it covers all of the sanitary engineering operations, what we do on water supply, what assistance we give with the city sewer systems—beyond the program of stream pollution—what we do in the way of aiding and developing methods of refuse disposal.

Also, our research in Cincinnati. That is the one center devoted to basic research on problems of the environment, along, of course, with the chemical picture. Then, of course, there is air pollution, which is

a new field—one that is becoming more important daily. All that is in the item of $683,000. In other words, this activity represents one group of a lot of items. So in the terms of the milk program, it is limited to one milk specialist—he is not an inspector—in each of our regional offices.

Mr. SCHWABE. That would be 10 of them.

Mr. HOLLIS. That would be 10, except that we don't have funds this year for that number.

Mr. SCHWABE. In other words, you only had six persons on that work.

Mr. HOLLIS. We could not cover the country with that number, so that some of those milk specialists worked more than one region.

Mr. SCHWABE. Is that limited to six persons, as I understand you?

Mr. HOLLIS. I am willing to say it is limited to six.

Mr. SCHWABE. Then I was correct, sir. This work is largely done along that line. The bulk of it is behind you, since you have gotten the States and the cities and local subdivisions to assume the responsibility of enacting into codes of laws or regulations with inspection and the policing of the program, and everything to protect the people against impure milk.

Isn't that pretty generally true, that statement?

Mr. HOLLIS. That is true, sir, but may I point out one or two points that we think we should concentrate on? For example, in the milk industry, as you know, it is a multi-billion-dollar industry——

Mr. SCHWABE. I appreciate that.

Mr. HOLLIS. Like other industries, it is not static, but it is developing. There are new processes. For example, at present, the flash pasteurization method is developing very fast. There are different kinds of equipment that are being developed. All of these major new developments go beyond the resources of any of the individual States. It would be hard for each of the 48 States to carry on the investigations and applied research necessary to test these principles—to keep abreast of these new developments. We attempt to do that for them.

Mr. SCHWABE. All right. Then you are just a clearinghouse, to that extent. Are you going to conduct all these experiments as you go along, or are you going to leave it to the States? What are you going to do?

Mr. HOLLIS. The States do not have the machinery for the research. We carry on basic research and keep in touch with the universities or centers that are doing the research, so that we can give the States the data and the scientific knowledge on which to base their own controls.

Mr. SCHWABE. I think you are getting the cart before the horse, but go ahead.

Mr. HOLLIS. There are one or two principal elements which have to do with training State and local people. I don't mean bringing them into a school and training them. State and regional offices, who call upon us to send our milk specialists to work with this city or that State man, to help him and develop him in terms of a specialist in the milk field.

Another big area demanding assistance which is quite confused is this interstate shipment of milk, which you mentioned a moment ago. Over 80 percent of all of our fluid milk is produced in so-called milk-producing States.

Mr. SCHWABE. All right. Let me just interrupt. I happen to know something about this thing; not a lot, maybe, not as much as you do. You talk about the interstate shipment of milk. For instance, take these big tank trucks today hauling milk from Minnesota and all over the country. You know I live in the city of Tulsa, Okla.

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. We know that the milk we get there is inspected and that sanitary men from Tulsa, Okla., go into Minnesota and inspect those dairies and that source of production. They inspect that milk before the tank truck starts down to Oklahoma.

Mr. HOLLIS. That is right, sir.

Mr. SCHWABE. I know what happens; I will not say there are daily inspections, but periodical inspections are made, and I know that inspection is afforded at the expense of the localities, the cities, if you please, for the protection of the consumers.

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. And then they go into other States, to far-removed points, in order that that very thing may be accomplished, which you are talking about, which is interstate shipment of milk, and insofar as those interstate shipments of milk are concerned, that is to protect the people at home, and that is done at our own expense.

Mr. HOLLIS. That is right, sir, but may I say to you that is one of the things the Conference of State and Territorial Health Officers repeatedly have pointed out, just that condition, in the southeast United States.

Mr. SCHWABE. But the man producing the milk does not get it into consumption through interstate markets unless he passes a standard inspection.

Mr. HOLLIS. That is right. But a difficulty arises this way, sir. That has been quite a problem to the producer or the series of producers in Minnesota, for example.

Mr. SCHWABE. You mean an association of milk producers, for example?

Mr. HOLLIS. Yes, we will say that. This situation prevails in all the States and they feel the same way about it. Cities feel that they don't want milk from Wisconsin or Minnesota coming into their city or State unless they know something about its quality. States say that it is quite an expense to send inspectors to Wisconsin, for example, or Minnesota, and about the time they get a group of dairies or producers cleared, then the producers may start shipping some elsewhere. When this happens the States have to send inspectors to other points again.

Mr. SCHWABE. If you send inspectors, they would not be just for one city, but his inspection would be for a number of cities; in other words, a multiplicity of cities would benefit by an inspection. Now, Tulsa sends inspectors as far as Amarillo, Tex.; isn't that correct?

A number of cities will enter into a compact and milk in a certain milkshed will be inspected by an inspector covering a multiplicity of cities.

Mr. HOLLIS. That may be done by State inspectors. We don't want to do the routine inspections because this would involve, instead of an appropriation of $80,000 to $100,000, a large sum for a force of Federal inspectors.

Mr. SCHWABE. That is right. But then where do you come in on the interstate question?

Mr. HOLLIS. I would like to explain it by telling you exactly what we do, in regard to our shellfish program.

Mr. SCHWABE. That may be all right, but let us talk about milk. You know more about it. I do not know about shellfish but I do know something about milk, which affects our babies. Go ahead.

Mr. HOLLIS. What I am going to explain in terms of our proposal on milk is exactly what we are doing on shellfish, as it works so well. Now, we propose that the authorities of the State control the production of sanitary milk, and that control should rest with the State within which the milk is produced. That is what is needed. And if the States and cities don't want to continue sending inspectors up, say, to milk-producing areas, for the producing States to develop means of inspection so that the receiving States can accept the controls of the producing States.

Now, here is what has happened. Many of the producing States—I am not saying all, but many of the producing States—do not afford inspection for the milk produced in the State which it ships out of the State, because it is beyond their control.

Mr. SCHWABE. That is true; they have got no jurisdiction over that.

Mr. HOLLIS. That is right; they have no jurisdiction over that.

So at present the only alternative is for the receiving States and cities to send their inspectors there to inspect the production of milk at its origin.

Mr. SCHWABE. In the case of a man producing milk in Minnesota—I mean no reflection on the producers of Minnesota, who are among the best, but a group that produces in Minnesota will not produce very long without adequate inspection. When we are in short supply in Oklahoma, we will send an inspector to Texas or wherever the milk is available, but that milk must meet certain requirements before it can be shipped into Oklahoma. If they do not meet our standards, they will suffer the consequences.

Mr. HOLLIS. It is necessary for them to develop inspection standards to such a degree that the milk will meet the consumer demand in your State; is that not so?

Mr. SCHWABE. Yes, sir; we would hope so.

Mr. HOLLIS. What we want to do, is to work with the various producing States.

Mr. SCHWABE. You said you did do it where you suspected trouble.

Mr. HOLLIS. I said we might do it.

Mr. SCHWABE. You never have done it?

Mr. HOLLIS. We have the authority.

Mr. SCHWABE. I don't think there is any doubt you have the authority.

Mr. HOLLIS. But rather than try to do it on a regulatory basis, we wanted to work with the producing States. We believe they will develop the machinery to do their own inspection, rather than the Public Health Service.

Mr. SCHWABE. That will meet the requirements of the consumer and the standard requirements which you would approve? Can you go that far?

Mr. HOLLIS. Yes, sir, and the different States take care of it. If we can do that then it boils down to a very simple procedure and we would merely make spot checks of the programs and list all of the producers that met the standards set by the producing State.

Mr. SCHWABE. In other words, you would become a clearinghouse?

Mr. HOLLIS. That is right.

Mr. SCHWABE. That is as far as I want you to go and I think the rest of it will take care of itself.

Mr. HOLLIS. We believe the interstate problems can be handled with a small staff.

Mr. SCHWABE. And likewise isn't it pretty generally true, I suppose with reference to the shellfish business? Isn't it?

Mr. HOLLIS. We have three men over the whole Nation on shellfish, excepting the research at Woods Hole, Mass.

Mr. SCHWABE. And likewise the same would be true of the other activities pretty generally here, after we get away from this 1948 act of water pollution control. Isn't that true of these other activities, generally speaking?

Mr. HOLLIS. In terms of the specific problem like milk?

Mr. SCHWABE. You say shellfish is one that would be lodged in the same category?

Mr. HOLLIS. It is, sir; three men in the Nation handle it.

SANITATION OF INTERSTATE CARRIERS

Mr. SCHWABE. And under sanitation of interstate land and water and air carriers—now you would say water in a train that was going from one State to another that was engaged in the interstate carrying of passengers with one of those items?

Mr. HOLLIS. Yes; all of the interstate carriers, trains, airplanes, and ships.

Mr. SCHWABE. When that gets down to where it is compared to milk it is of even less consequence generally, isn't it?

Mr. HOLLIS. No, sir. Going back, there is no check on the interstate carriers. There is no protection for the traveling public other than that program.

Mr. SCHWABE. I did not say it was one other than this program but in your general observation and the casual inspection, after setting up a standard, that is pretty much the same as it is in the milk and shellfish business.

Mr. HOLLIS. We have to do the same thing in the interstate carrier program that the States have to do in their problems of water sanitation or food. In other words, the responsibility for testing and improving and the sanitary quality of the product is done by them.

Mr. SCHWABE. But I am talking about drinking water in dining cars, for example.

Mr. HOLLIS. And milk, food, and sewage disposal?

Mr. SCHWABE. Let us stick to the water first, drinking water in the dining cars and in the tanks provided for the people who consume water for drinking purposes, the different sources of supply of water that are at certain stations. They have a regular routine for those things, don't they?

Mr. HOLLIS. The carriers themselves follow our list of approved sources. This is a list of them [indicating thick book].

Mr. SCHWABE. That is what I say, and in so far as ice and the water, the inspection of that has all been covered for years now, hasn't it? The pick up this ice and water at certain places and you know where that is and the State authorities know where it is.

Mr. HOLLIS. The State does not know necessarily because they don't have any jurisdiction over it. The carriers notify the Public Health Service.

Mr. SCHWABE. You have it then?

Mr. HOLLIS. Yes; we have it here.

Mr. SCHWABE. And you know whether that source of supply is a sanitary and pure water supply.

Mr. HOLLIS. We do, or we find out. That is our job.

Mr. SCHWABE. Then it becomes a matter of policy, checking or a perfunctory matter from there on, doesn't it?

Mr. HOLLIS. No, sir; it does not end with just getting water from an approved source, we will say, Washington, at the terminal. The Washington water supply is an approved source but the transfer of that water onto all of those interstate cars involves a whole network of water distribution lines within the terminal, and our job is one of working with the industry on the design of that distribution system to minimize the hazards, because as I mentioned you have to put it in by hose. You haven't a permanent connection in that the cars don't stop at the same place. You have to cross tracks with that hose.

Mr. SCHWABE. And the same condition prevails as to the ice?

Mr. HOLLIS. That is right.

Mr. SCHWABE. But you don't keep somebody down there all the time?

Mr. HOLLIS. No, sir.

Mr. SCHWABE. You could not afford to do that?

Mr. HOLLIS. That is right, and we put particular emphasis on the railroad industry to have them design their system. We have men who work right on the drafting board with the design of all of these cars.

Mr. SCHWABE. Well, could we reduce instead of developing and enlarging these programs? That is what I am getting at. Why do we want more people instead of less people, not in every instance? As the years go on why not have our program diminish rather than increase?

Mr. HOLLIS. Actually this program here has been stable for years. There has been no increase.

Mr. SCHWABE. Why not diminish it? Do you conceive it might be worked out where it might result in a reduction of personnel rather than having it remain static?

Mr. HOLLIS. The emphasis changes. For example, the airplane increases air travel.

Mr. SCHWABE. We were talking about trains. Let us stay with them long enough to dispose of that.

Mr. HOLLIS. These same people do it all; we don't have inspectors who limit their activities to trains, busses, airplanes and ships. We could not afford to do it with these funds. As far as possible we develop a man with a multiple competence and he is able to do the dining-car inspection, water, and ice inspection. He also works with the State on the sources. He is able to do the ship inspection and pick those up as he goes by. The airplanes and the busses are coming in and all new designs of busses, they are all going to carry toilet facilities and even a lunch counter. There are changes in the dining car development. The dining car industry itself is changing and making improvements in all their designs of dining cars, because of

certain inefficiencies from their standpoint. So you can see we are getting quite a few changes. Now at the moment the big problem ahead of us is what are we going to do with substitute material? They have got to reactivate equipment in terms of what the travel load will be. It will appear that as travel increases they will have to reactivate a lot of the old cars that are broken down and to make the repairs of those cars. A lot of material will be required much of which is in short supply. That indicates the complexity of our civilization which is constantly changing.

Mr. SCHWABE. If private industry can do it I cannot see why the Government cannot fit itself and accommodate itself to the same economy that private industry has, and I think we should work more along that line and that is what I was in hopes you would show us you are doing, but I don't believe you are. I believe you are expanding rather than contracting activities to the point where you would be saving the people's money as I had hoped you might be able to do.

Mr. HOLLIS. May I say in that connection, sir, that with all of the increased travel that we anticipate, with the additional loads that are being placed on our Cincinnati center of environmental research and the problems facing us today in the protection of water supplies—there are serious problems. We have leads on filter materials that at present we have two men on. We are trying to absorb this increased work. We have no increase in this appropriation item; the only increase is in radiological health service which we worked out to meet the problem of the atomic age. The rest are old.

Mr. SCHWABE. That is all.

Mr. FOGARTY. Mr. Busbey.

QUESTION OF CHARGING CARRIERS FOR SANITARY INSPECTIONS

Mr. BUSBEY. Mr. Hollis, in fairness to you, in order that you might have the benefit of my thinking before I put my question to you, I would like to say that I am one of those individuals who is to some extent enraged over the increased centralization of Government here in Washington and the delegating of additional powers to our Federal Government, things that seem historical. You may recall that originally the Republican Party was the party that advocated a highly centralized government and the Democractic Party was the party advocating the so-called State rights. Lately it seems like the two political parties have done a little switching in their thinking, but regarding this sanitation of interstate land, water, and air carriers my question is this: Why shouldn't that expense be charged to the carriers? Why shouldn't they pay it?

Mr. HOLLIS. Well, there is really no reason why they should not except if we tried to develop a practical method of assessing the cost, particularly when you are using the same inspector to cover ships, airplanes and trains—I had wondered if we would not get ourselves involved in administrative entanglement that would be most difficult to administer. We have the same problem in trying to meet the demands of other Federal agencies. It is quite hard for us to work out the mechanics of some of these programs with which we are confronted.

Mr. BUSBEY. I don't think the involvement would be near as great as the involvement in forcing the businesses of our country to collect the tax for the Internal Revenue Bureau which is commonly known as the "withholding tax." Frankly, I see no reason why that program has evolved as it is, carried on. I think the cost of it should be charged to the individual enterprises and I think the carriers certainly could stand what little expense it would be to them if you were to prorate this charge. I would say that is my line of thinking not only in this particular item but when it applies to our Federal Government. Has that ever been brought out?

Mr. HOLLIS. We tried to think it through and tried to develop an equitable approach to that same problem as I say on other costs from other Government agencies and we do it to some extent now.

The Park Service is an example. If they have a problem in the national parks on sanitation since they have no sanitary engineer within the Park Service itself, they use our service. We do it for them. They pay traveling expenses of our man from the regional office who goes out there and does the necessary design. But even in that case when we try to pro rate time, when we try to get reimbursement for the time of the man, it gets quite involved because there are other things that he will do in that area that relate say to the Coast Guard or State work. So it is hard to tie down the hours and the bookkeeping becomes complicated.

Mr. BUSBEY. But sometimes these formulas don't prove out to be as complicated as they originally appear, is that correct? For instance, I am thinking in the field of profit sharing among all types of business. For a long time everybody just threw up their hands when it came to the contracting business and said dealing with the various trades and having different kinds of mechanics is so involved that it just cannot be done. A friend of mine in Chicago, one of the largest general contractors in the Midwest proved that it could be done, that it was not very complicated and he meets all union requirements.

Mr. HOLLIS. Well, given the proper Federal law to do it, I would no doubt be the last to say it could not be done. I would say based on very limited or with practically no personal experience with that kind of finance I really am not competent to have an opinion. I appreciate too that you would have to have legislation which we don't have now.

Mr. BUSBEY. But at the same time these are items I am exploring in my mind at the present time to get away from this concentration of population in Washington, especially when the President has launched the dispersal program at the present time.

I think that is all, Mr. Chairman.

Mr. FOGARTY. Have you any further statement you would like to make?

Mr. HOLLIS. That is all, Mr. Chairman, unless you wish any data supplied.

BREAKDOWN OF PERSONNEL ON MILK, FOOD, AND GENERAL SANITATION WORK

Mr. FOGARTY. Will you put in the record data on these 120 men?

Mr. HOLLIS. I will be glad to furnish a statement for the record on that.

(The data requested are as follows:)

Breakdown of 120 positions

Fundamental and applied research and studies related to water, milk, and food sanitation, Cincinnati, Ohio	57
Shellfish sanitation:	
Woods Hole, Mass	5
Headquarters, Washington, D. C	2
Region 2, New York	1
Technical and consultative services to State and local health services:	
Headquarters, Washington, D. C	16
Region 4, Cleveland	1
Region 5, Chicago	1
Region 7, Kansas City	1
Milk and food sanitation:	
Headquarters, Washington, D. C	8
Region 1, Boston	2
Region 2, New York	4
Region 3, Washington	4
Region 4, Cleveland	2
Region 5, Chicago	4
Region 6, Atlanta	2
Region 7, Kansas City	4
Region 8, Dallas	2
Region 9, Denver	1
Region 10, San Francisco	3

List of personnel performing milk and food and other general sanitation activities and their length of service

Name	Years	Months	Name	Years	Months
Butterfield, C	32		Magenis, S	1	1
Palmer, C	1		Mitchell, M	1	
Chambers, C	11		Kelly, C	1	2
Bendixen, T	2	5	Atkins, C. H	15	3
Jeter, H	3		Board, L. M	8	
Berk, M	2	6	McBride, J. R	9	7
Otting, R	29		Van Derwerker, R	7	9
Menz, W	1	4	Holy, W	7	8
York, J	10		Thomas, J	2	4
Yingling, D	1	8	Kritini, A	1	6
Kroner, R	4		Kent, F	2	9
Mundew, T	1	4	Rabenau, A. N	2	1
Coffey, R. V	6		Rosenlieb, R. K	3	6
Gallenstein, M		8	Linek, H. S	1	6
Maloney, T		6	Owen, V	1	7
Brock, S	2	7	Grissett, E. J		9
Braun, R	1	9	O'Donnell, M. C	1	1
Schroeder, K	5		Rosier, E. C	1	6
Leicht, L	6		Deblinger, R. N	1	1
Martin, E	7		Longaker, R	1	3
Duffey, R	1	9	Evans, D	9	
Ray, H	3	5	Weaver, L	2	5
Korte, A	26		Helvig	9	4
Myers, D		8	Lieberman	2	10
Wald, C	1	10	Wingate, B. J		11
Rhoden, F	14		Thompson, H. E	1	11
Koppe, J	1	7	Raymond, D	1	4
Hagee, G	1		Koetz, S	7	7
Inskeep, J	2	6	Hollis, E	2	10
Kennedy, G	2	6	Hook, C	7	5
McGuire, N	2	6	Jiacinto, A. T		9
Settles, N	2	5	Rogers, S. M	1	4
Wessels, R		10	Taylor, H. C	9	1
Durnell, J	30		Ayer, H	2	2
Brittingham, W	24		Freeman, A. B	12	2
Leslie, V	15		Green, R. S	9	10
Stephenson, C	10		Powell, E	2	5
Stewart, E	12		Udell, H	4	5
Dixen, J		7	Fuchs, A. W	34	5
MacKenzie, V. G	12		Eubanks, M. A	5	3
Ruchhoft, C	19		Faulkner, J. D	1	10
Stevenson, A	10		Hauser, L. S	4	2
Wiley, J	11		Beaver, L	4	1
Kabler, P	2	6	Robinson, H. B	8	5
Tarzwell, C	8		Crosbie, L. M	5	5
Raneri, R	11		Taylor, D. W	7	2
Weibel, S	12		Adler		8
Norris, F	12		Summers, D. K	1	11
Coulter, J	1	5	Schement, R	1	
Black, L	8		Wainess, H	8	1
Levine, B	15		Pechham, L. C	7	6
Thomas, R	24		Fenerseig, R. B	1	
Bordner, R		6	Dashill, W. N	14	5
Faig, H	7		McLean, W. R	1	1
Joyce, T	2		Gilmore, A	1	2
Presnell, M		7	Moore, O. D	7	
Weber, G	4	6	McAndrews, H. G	1	11
Wattie, E	23		Fujii, H	2	4
Arciss, W	8				

FURTHER REFERENCE TO MILK SPECIALISTS

Mr. FOGARTY. Mr. Denton, have you any questions?

Mr. DENTON. Just what do the six men do whom you call milk research men?

Mr. HOLLIS. They are attached to the regional office staff. They are on call by the States and they aid the States in developing their programs. They attend meetings at the request of many of the consuming States on the question of milk supply. The way it works our Chicago regional office will get a request from Georgia in regard to a milk supply just outside of Chicago. They will want to know whether the milk supply is satisfactory and they will wire our office to see if we could check the supply. We try to do a certain amount of that type of work. We are attempting to set up this method of interstate shipments so that it will work out satisfactorily without requesting any increased appropriation on the part of the Federal Government, and then we have calls from industries which are going to develop new pieces of machinery. They call on us to look at the design of a segment of a pasteurization machine, for example. They wish to get professional judgment on whether that will work and will be sanitary and satisfactory.

Mr. DENTON. What were you saying about Minnesota and Wisconsin or some other State applying for someone to inspect their milk supplies? I did not get it.

Mr. HOLLIS. We were trying to have their producing and State men set up their own control program over milk. The only test is that the consuming States have got to accept that Minnesota ruling, otherwise it will not work. In order that they may have a basis of checking, say, Minnesota milk, to see that it maintains a high standard, we were going to act, and very carefully check their methods of rating their milk supply. In other words, the Public Health Service through these six men would go in and spot check throughout the State. Our men would spot check the rating system followed by the States, and if the State mathematical check was satisfactory to us there would be no argument about it. We would then publish the list of the ratings of the producing States. Now our rating would show the spot checking of the various producers, and the consuming cities and States would know that producer A had a 95 percent rating, producer B had a 60 or 80 percent rating, and so on, and we would merely be a clearinghouse to get that data out to the consuming States. The consuming States can determine then which of these producers they would permit to ship into their own States and thereby eliminate the need of the consuming States and cities sending inspectors long distances to check.

The producing States are more than willing to go along because they say the poor farmer is put in a terrible predicament in that he sometimes has as many as 20 inspectors from different States and different cities coming into his production center and they all have just enough difference in their own local ordinances that one man would say you can use this detergent, the other man will say you must not use this detergent. One man will say you must have steam sterilization and another man will say you must have chemical sterilization. So from many cities and States you get little differences which make the problem very complex.

Mr. DENTON. In other words, you want to get a uniform inspection that would be uniform?

Mr. HOLLIS. Yes, and it would be all purely voluntary. It will work because it worked on shellfish and we have had three men working on that industry in the whole United States.

Mr. DENTON. Why are not the milk States working on the proposition?

Mr. HOLLIS. Of course, we haven't got into it very fully but the milk States have submitted reports and resolutions to have something done to the States themselves; and may I say to you, sir, that on June 1–3, 1950, there was a national conference on interstate milk shipments. It was held in St. Louis. This conference was called by representatives of 26 States, which included all of our heavy producing States. It included the State departments of agriculture and the State departments of health, because many States' milk control is under the State department of agriculture, and representatives of industry were present.

Now, they had six resolutions and recommendations that they adopted. I will not bother about all of them but the first one was that—

> The United States Public Health Service should initiate a program to standardize rating procedures of the State rating officers and should issue certificates of competency to qualified State health department officers.

I will read all of it:

> To assure uniformity the United States Public Health Service should spot-check the laboratories of the State agencies participating in the certification of milk for interstate shipment, and should certify their compliance with standard methods—

which was an endorsement of the proposal that we made. So it is something that the consuming States want so that their milk can be shipped without difficulty.

AUTHORITY OF GOVERNMENT TO CONTROL WATER POLLUTION

Mr. DENTON. You spoke something a little while ago about going back to the 1948 law in regard to water pollution. You said that the Government could take some action. Just what action could the Government take under that?

Mr. HOLLIS. Congress authorized in that law that in instances of an interstate stream, if waters from one State flowing into another State created a nuisance—and they defined "nuisance" to mean jeopardize health, encroach on normal water uses, et cetera—that the Federal Security Agency could notify the offender in the State in which that pollution originates and request that preventive measures be taken. If within a reasonable time corrective measures are not taken, then there would be a second notice. Also we would notify the State that we will hold hearings to determine the degree of damage to the second State. If that was not heeded then the Federal Government could, with the consent of the State in which the pollution originated, introduce a suit against the source of pollution in the Federal court.

Mr. DENTON. Say a city upstream is polluting the water, you would have to get the consent of the State before you could prosecute the city?

Mr. HOLLIS. That is right.

Mr. DENTON. Has any action like that been taken?

Mr. HOLLIS. No, sir; and we are hopeful no such action will be necessary. You recall the President's Water Policy Committee; in speaking on that subject in his weekly report, he stated that he hoped the Federal, State, and local authorities could cooperate and work it out satisfactorily, and if they could not work it out satisfactorily, then the only other alternative the President had would be to direct Federal control. However, we are convinced it can be worked out and it will work.

OPINIONS GIVEN TO MILK PRODUCERS

Mr. BUSBEY. Mr. Hollis, I believe the National Association of Milk Producers are working on this; are they not?

Mr. HOLLIS. Yes, sir.

Mr. BUSBEY. What are they doing as an association to bring about a standardization of inspections and tests?

Mr. HOLLIS. May I say, sir, there are two national associations? One is the National Federation of Milk Producers and the other is the National Association—I am not too clear, sir, of the title, but one association is lodging an effort by industry to pool its know-how and resources in an effort to stimulate better milk and more consumption of milk. It is an industry-sponsored association in the interest of its product. They are doing an excellent work.

Mr. BUSBEY. Do they have facilities similar to those of the laundry association?

Mr. HOLLIS. I am not sure of that.

Mr. SCHWABE. It is the launderers association you are referring to.

Mr. HOLLIS. Yes, sir.

Mr. SCHWABE. In other words, they have an organization comparable to that of the launderers?

Mr. HOLLIS. Yes, sir; that is right. And the institute of that organization concentrates its effort on the standardization of equipment and they issue approval of certain types of equipment.

Mr. BUSBEY. Now, you have stated your men were called in from time to time and that they are working with these different industries in regard to the design of new equipment. Let us take, for instance, the Cherry Burrell Co., which is one of the largest producers of machinery for the milk industry. Has the Cherry Burrell Co. ever called on your division for men to consult with them on the development of their machinery?

Mr. HOLLIS. I will have to say offhand I do not know. I do know that the Cherry Burrell men drop in our office when they are in Washington. Whether they are in on a specific piece of equipment or not I do not know. It would be my strong conviction that they have been in for that purpose.

Mr. BUSBEY. Isn't it a fact they have a very large engineering staff that is working on equipment year in and year out?

Mr. HOLLIS. Yes; they have a very competent staff.

Mr. BUSBEY. I was just trying to figure out what service you could render a company like that of the Cherry Burrell Co.

Mr. HOLLIS. Of course they are competent in the details of equipment and they take matters up with us in regard to sanitary items. They might ask us, "If we put this piece of equipment in operation

what do you think about? Is it practical enough that it could be knocked down for cleaning purposes satisfactorily?"

Mr. BUSBEY. But where would your men be better qualified to pass judgment on that phase of it rather than their engineering staffs.

Mr. HOLLIS. Except that our men also have a very high competence. They are engineers trained and specializing in the sanitary aspects of this problem. I would not want to say that Cherry Burrell does not have men equal to any men we have, but I will say that generally on complicated equipment that is going to cost a lot of money to put in production they would like the opinions of other specialists.

LENGTH OF SERVICE OF PERSONNEL

Mr. BUSBEY. What is the percentage of turn-over in personnel in your department?

Mr. HOLLIS. Well, the chief of our milk work has been on that program for 25 years and four of his field men run up in that field of milk work and food work for almost that length of time. We have personnel specifically on milk but actually many of our inspectors do both milk and food work. Many have been in the field for years. The length of service of those men ranges from one man of 2 years' experience to men who have had 15 or 20 years' experience.

Mr. BUSBEY. And you have 120 positions in the milk-food sanitation department?

Mr. HOLLIS. No, sir. Again that is misleading, because it is a poor title in that particular item "Milk and food."

Mr. BUSBEY. That was the list of personnel I believe Mr. Denton asked to be put in the record.

Mr. HOLLIS. Yes, sir.

BREAKDOWN OF PERSONNEL ON INTERSTATE CARRIER WORK

Mr. BUSBEY. When you do that I wonder if you would put into the record the names of the 88 positions on sanitation of land, water, and air carriers along with the number of years each has been with the department?

Mr. HOLLIS. Yes, sir; I will do that.

(The data requested are as follows:)

Breakdown of 88 positions

	Land and air carrier sanitation	Vessel sanitation program
Headquarters, Washington, D. C.	4	6
Region 1, Boston		3
Region 2, New York	4	11
Region 3, Washington, D. C.	4	7
Region 4, Cleveland		2
Region 5, Chicago	5	2
Region 6, Atlanta	4	3
Region 7, Kansas City	3	3
Region 8, Dallas	3	10
Region 9, Denver	3	
Region 10, San Francisco	3	8
Total	33	55

List of personnel performing sanitation of land, water, and air carrier and their length of service

Name	Year	Month	Name	Year	Month
Garthe, E. C	14	7	Stanowski, S	2	6
Deegan, A		2	Wilbern, B	2	
Butrico, F	6	5	Henderson, P	3	6
Shirck, E	6	10	Carlson, H	20	6
Valachovic, D	4	11	Woosley, L	4	8
Koschnick, W	4	8	Sherman, L	5	11
O'Neil, B	2	1	Casaliana, E	4	8
Jodaitis, L. T	1	8	Tisdale, W. W	4	8
LeVan, J. H	19	9	Rathburn, J	3	2
Dermody, J	8		Edwards, M	1	5
Sorge, H	6	7	Roahrig, H	9	5
Craig, N	4	8	Miller, W	7	2
Curlette, W	4	8	Renneberger, E	2	2
Ericksen, G	4	8	Taylor, F	4	5
Hemmy, C	4	8	Resnick, P	4	5
King, R	4	8	Ronan, V	3	9
Sellar, J	2	8	Musson, D	2	1
Murdy, W	2	1	Sitler, W	2	1
Chapman, H	7	7	Eastman, P	2	8
Fletcher, C	25	8	Troutman, C	4	4
Weaver, A	5	11	Libonati, M	1	7
Skeen, E	5	11	Fooks, J	2	2
Landecker, T	5	8	Nichols, F. A	2	2
Forst, M	3	9	Rusin, C	2	1
Biro, V. E	2	3	Beadal, H		9
Macomber, R	2	1	Carley, G	9	10
Tilton, M. A	1	2	Gerber, R	2	4
Odom, O	5	6	Bedinghaus, M		11
Albee, M	1	9	Jay, R. A	1	7
Woodruff, J	2	11	Ferguson, G	9	10
Jones, M	3	7	Reeves, E	2	10
Longan, F	3	8	Payne, S	4	8
Lee, J. P	4	8	Anderson, E. C	9	10
Dillon, T. J		8	Smith	4	4
Long, R. P	13	1	Gipson, G	2	
Boyer, J. A	4	7	Bowman, C	6	7
Bowers, J. P	14	10	Kehr, F	7	8
Quartana, A	5	11	Patston, G	5	3
Griffin, W	5	11	Carlson, H	20	7
Helm, J	4		Bradley, B	1	
Smith, A	2	11			

Construction of Facilities at Cincinnati, Ohio

Mr. Fogarty. Mr. Hollis, a couple of years ago you were authorized to build a new building in Cincinnati.

Mr. Hollis. Yes, sir; under Public Law 845.

Mr. Fogarty. Has the contract been let?

Mr. Hollis. Yes, sir.

Mr. Fogarty. It has been let?

Mr. Hollis. It has been let and construction is under way.

Mr. Fogarty. And what is the contract price?

Mr. Hollis. The contract price—well, there are really two contracts. For the base contract, $3,609,500. The elevator contract was let separate and it is for $38,993.

You might recall, Mr. Chairman, Congress limited the appropriation for the structure to a $4 million total. For plans and specifications $200,000 had been allocated to Public Buildings, which left for construction $3,800,000.

Mr. Fogarty. That is right. So that the contract has been let within the appropriation authorized by Congress?

Mr. Hollis. Yes, sir.

Mr. Fogarty. And according to the hearings on the independent offices a year ago, Mr. Thomas, chairman of the committee, asked

Mr. Laughlin why shouldn't this $2,400,000 be appropriated in cash, and Mr. Laughlin said it did not make any difference to him and the independent offices did not appropriate cash and just authorized $2,400,000.

Mr. HOLLIS. That is right.

Mr. FOGARTY. So we have it shown in our justification on page 41, $1,400,000, that was actually appropriated in 1951. Is that right? And an authorization of $2,400,000 in 1951 which was up in our appropriation, and an appropriation of cash, of $2,400,000, which leaves better than $1 million.

Mr. THOMPSON. The $2,400,000 is to liquidate the contract authorization.

Mr. FOGARTY. That is right, that contract authority was given last year, so we are just liquidating that contract. The contract was let, and when will the building be completed?

Mr. HOLLIS. The building is to be completed in 630 calendar days.

Mr. FOGARTY. So you are going to have left out of that $3,800,000, about $151,000?

Mr. HOLLIS. I might say that was set up as a contingency by Public Buildings. You know the Public Buildings Administration is handling this whole project and the original contract for the structure exceeded the permissible amount set up by Congress. Since the Public Buildings Administration felt they had to have a minimum of $150,000 contingent fund, because of some possible difficulties on foundations, the building was altered slightly in terms of minor construction changes. For example, leaving of the concrete ceilings with no plaster, and the floor covering was changed and altered in an effort to come within the allowable limit.

Mr. FOGARTY. But who got the original $200,000 for plans and specifications?

Mr. HOLLIS. That went to Public Buildings.

Mr. FOGARTY. And then you let the contract which totaled $3,648,000?

Mr. HOLLIS. That is correct.

Mr. FOGARTY. So that leaves a balance of $150,000?

Mr. HOLLIS. I wonder, Mr. Chairman, if we might get a breakdown from Public Buildings? As you recall the appropriation was to them.

(NOTE.—The $151,507 will be used for such items as floor covering, Venetian blinds, landscaping, etc., not covered by the construction contract.)

Mr. FOGARTY. Will this building take care of all your people?

Mr. HOLLIS. Yes, sir.

Mr. FOGARTY. Your problem in that respect will be over in 1952.

Mr. HOLLIS. It will in terms of the research personnel; yes, sir.

Mr. FOGARTY. Are there any further questions? Mr. Schwabe?

Mr. SCHWABE. No, sir.

Mr. FOGARTY. Have you any questions, Mr. Busbey?

Mr. BUSBEY. How many divisions of the Public Health Service will this building contain and will there be other divisions besides yours in the building?

Mr. HOLLIS. There will be the Divisions of Water Pollution Control, Radiological Health, Milk and Food and other general sanitation

activities, the Division of Sanitation of Land, Water and Air Carriers, the Division of Industrial Hygiene and Administration.

Mr. BUSBEY. But they are all under your jurisdiction?

Mr. HOLLIS. Yes, sir.

Mr. BUSBEY. I was trying to ascertain if the work under your direction was the only agency that was going to occupy this building?

Mr. HOLLIS. That is right; yes, sir.

PROBABLE NUMBER OF PERSONNEL AT CINCINNATI

Mr. BUSBEY. How many total employees will be housed in the building?

Mr. THOMPSON. I don't have that figure available, Mr. Busbey, but I can insert it in the record.

Mr. BUSBEY. Approximately how many? Will you insert the correct figure, if you please?

Mr. HOLLIS. There are approximately 200 to 300.

Mr. BUSBEY. 200 to 300 shows quite a variation.

Mr. HOLLIS. And I appreciate that, sir.

Mr. FOGARTY. You can get the precise figure and put it in the record.

Mr. HOLLIS. Yes, sir, I will do it.

(The data requested are as follows:)

In accordance with present plans 201 persons will occupy the Cincinnati building.

Mr. BUSBEY. I was trying to see how much we were spending for accommodations per an employee in the building in Cincinnati. That is all, Mr. Chairman.

Mr. HEDRICK. Where will the building be located in Cincinnati?

Mr. HOLLIS. It will be just off the Columbia Parkway, which is a main artery out of Cincinnati.

Mr. HEDRICK. How many square feet in the building?

Mr. HOLLIS. There will be approximately 110,000 square feet, sir, but may I correct that figure in the record?

Mr. HEDRICK. Yes. How many stories in the building?

(NOTE.—Building will contain 135,000 square feet.)

Mr. HOLLIS. There are four stories. There is, because of the lay of the land, there is what we call a basement at the back of the building, but above ground in the front there will be four floors.

Mr. HEDRICK. And what is the size of the lot that you built on?

Mr. HOLLIS. There are approximately 8 acres in that piece of ground that the Government owns.

Mr. BUSBEY. The $4,000,000 did not include the cost of the land?

Mr. HOLLIS. No, sir; the land was given to the Government or rather transferred to the Federal Government some 10 or 12 years ago in exchange for another piece of land downtown that the Federal Government owned and which the city wanted for a museum site. So it has been in the hands of the Federal Government for some years, approximately 10 or 12 years.

Mr. HEDRICK. You spoke a moment ago about sterilizing milk. Do you favor steam or chemicals?

Mr. HOLLIS. I think either one properly done will work. I personally prefer chemical sterilization because it is more practical for application at the farm, but either one will work fine.

Mr. HEDRICK. Which one is used most?

Mr. HOLLIS. Chemical sterilization, at least 10 to 1.

Mr. HEDRICK. That is all.

ENGINEERING, SANITATION, AND INDUSTRIAL HYGIENE

BREAKDOWN OF APPROPRIATIONS AND PERSONNEL BY ACTIVITIES

Mr. FOGARTY. At this point I will insert in the record statement a prepared by the Budget and Financial Branch showing engineering, sanitation, and industrial hygiene, Public Health Service, positions and total obligation by subactivities for fiscal year 1951–52.

(The data are as follows:)

Engineering, sanitation, and industrial hygiene, Public Health Service—Positions and total obligations by subactivities for fiscal years 1951 and 1952

	1951		1952	
	Position	Amount	Position	Amount
Water pollution control	235	$1,491,283	235	$1,457,000
Headquarters	60	429,108	60	402,210
Basin offices	88	562,175	88	587,790
Environmental health center	87	500,000	87	467,000
Radiological health	30	222,074	57	415,000
Headquarters	9	61,696	9	63,000
Environmental health center	7	55,378	13	97,000
Columbia River investigations	14	105,000	15	115,000
Water-decontamination studies, Oak Ridge			16	117,000
Waste disposal studies, Los Alamos			4	23,000
Milk and food and other general:				
Sanitation activities	120	679,177	120	683,000
General sanitation activities (Technical and consultative services, milk and food sanitation, shellfish sanitation.)	58	335,594	58	348,500
Environmental health center	49	268,027	49	259,000
Milk and food laboratory (Cincinnati)	8	43,500	8	43,500
Shellfish laboratory (Woods Hole)	5	32,056	5	32,000
Sanitation of land, water, and air carriers	88	431,828	88	432,000
Industrial hygiene	112	705,896	112	668,000
Administration	37	139,772	37	145,000
Total appropriation	622	3,670,030	649	3,800,000

FEBRUARY 23, 1951.

DISEASE AND SANITATION INVESTIGATION AND CONTROL, TERRITORY OF ALASKA

WITNESSES

DR. J. W. MOUNTIN, ASSOCIATE CHIEF, BUREAU OF STATES SERVICES

ROY L. HARLOW, CHIEF FINANCE OFFICER, PUBLIC HEALTH SERVICE

DISEASE AND SANITATION INVESTIGATIONS AND CONTROL, TERRITORY OF ALASKA

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$1,317,000	$1,259,000	$1,234,000
Unobligated balance, estimated savings	−7,526		
Savings under sec. 1214		−25,000	
Total obligations	1,309,474	1,234,000	1,234,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Special grant to Alaska for general health purposes	$757,117	$700,000	$630,000
2. Direct operations:			
(a) Technical assistance to Alaska	136,828	113,380	140,000
(b) Field and laboratory investigations	349,765	362,820	404,700
(c) Administration	65,764	57,800	59,300
Total obligations	1,309,474	1,234,000	1,234,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
Total number of permanent positions	73	71	75
Full-time equivalent of all other positions	2	1	1
Average number of all employees	57	65	73
01 Personal services:			
Permanent positions	$273,254	$309,290	$357,352
Part-time and temporary positions	16,135	3,470	3,470
Regular pay in excess of 52-week base	252		788
Payment above basic rates	63,905	81,791	95,808
Total personal services	352,546	394,551	457,418
02 Travel	58,886	41,100	44,100
03 Transportation of things	22,009	7,260	8,260
04 Communication services	2,371	2,750	2,750
05 Rents and utility services	7,471	37,730	37,730
06 Printing and reproduction	924	1,350	1,350
07 Other contractual services	16,850	6,720	7,730
08 Supplies and materials	44,769	28,326	30,326
09 Equipment	46,531	14,180	14,180
11 Grants, subsidies, and contributions	757,117	700,000	630,000
15 Taxes and assessments		33	156
Total obligations	1,309,474	1,234,000	1,234,000

Mr. FOGARTY. We will now take up disease and sanitation investigation and control, Territory of Alaska, found on page 837 of the justification and page 70 of the printed bill.

Dr. Mountin, have you a statement for the committee?

GENERAL STATEMENT

Dr. MOUNTIN. Mr. Chairman, for the past 2 years the Public Health Service has been conducting a program which is contributing to health and national security in the Territory of Alaska. It is unnecessary, I know, to dwell here on the strategic importance of Alaska and of low-temperature areas in general. But what must not be overlooked is that this new importance—and the influx of civilian and military personnel—accentuates the need for more adequate health services in these areas. There is a practical urgency today not only to meet existing health needs, but to find answers to the health questions which may impede our defense effort in Alaska.

FUNDS AND TECHNICAL HEALTH ASSISTANCE TO THE TERRITORY

The Public Health Service is attempting to meet those needs by providing funds and technical health assistance to the Territory and by conducting investigations designed to improve health conditions in Arctic and Subarctic areas. Through a special grant, we are helping the Alaska Department of Health improve their health services throughout the Territory. For example, part of this fund has been used for the operation of mobile health units, via ship, rail, and highway, in sparsely populated and widely separated localities. In this way health services are brought to areas otherwise inaccessible.

The case-finding program for tuberculosis, the most serious health problem in Alaska, has been speeded up all over the Territory. Many of the areas with a high incidence of tuberculosis have also been reached by BCG vaccination. Regional offices with laboratories and a full complement of Public Health personnel have been established at Ketchikan, Anchorage and Fairbanks.

Another way the Public Health Service is meeting the health problem in Alaska is by assigning technical specialists to the Territorial department of health. Currently, there are 12 Public Health personnel—physicians, nurses, engineers, and others—employed by the Public Health Service that have been assigned to the Department.

ARCTIC HEALTH RESEARCH CENTER

Finally, our field station in Alaska, the Arctic Health Research Center, is conducting a program of research and investigation into special health needs and problems under low-temperature conditions. Customarily research is looked on as a long-range process which, of course, it is. There are few ways to short-cut the patient, painstaking search for new knowledge. But in Alaska, our research is a blend of the basic and the applied and has as one of its major aims acquisition of knowledge which can be adapted for current use in low-temperature areas. We have developed, for example, new methods of combating flies and mosquitoes in Alaska, where ordinary larvacidal and control measures have been found ineffective. Widespread use

is now being made, both by the civilian and military authorities in Alaska, of a portable aerosol spray unit for insect control which was developed by the Arctic Health Research Center. We are still working, however, to improve the design of the apparatus and to increase its mobility.

ENVIRONMENTAL HEALTH INVESTIGATIONS

We are also concentrating on environmental health investigations, with particular attention to community and private water supplies and to sewage-disposal systems. The conditions of permafrost and extreme seasonal variations present unique problems for ordinary environmental sanitation safeguards. These problems must be solved and engineering standards suitable for use in low-temperature areas must be developed if Alaska is to be made healthful for an increasing civilian and military population.

The research programs which we have conducted in Alaska has enabled us to make a start toward finding the answers for many health needs in low-temperature areas. The budget estimates submitted here today will enable us to continue that program at approximately the same level.

I will be glad to go further into the details, sir, if you wish.

INCREASES AND DECREASES PROPOSED

Mr. FOGARTY. Thank you, Doctor.

In your appropriation you show some change in direct authorization and grants. There is a decrease of $70,000 in special grants to the general public health services. Why was that?

Dr. MOUNTIN. After consultation with the health authorities in Alaska, it was found that the need for the research was very great and that we could probably make our greatest contribution under the ceiling that was established, by adding to the research program. It has been found also that the Territory has been having some difficulty in recruiting personnel and so we have been sending some people up there and paying them out of this budget. In that way it is believed the greatest amount of assistance can be accomplished. We are endeavoring to unravel some of the basic scientific questions which heretofore have delayed the health improvement in Alaska. It is a question of getting better information. In our opinion that is what we need first.

Mr. FOGARTY. Have you been able to get better information this past year?

Dr. MOUNTIN. Yes, sir; I think we have made some very significant accomplishments. I will give just a few of them. One of the conditions that has been a source of great trouble up there, particularly among the native population and to some extent among the nonnative population, has been a condition of keratoconjunctivitis. It leads to the formation of ulcers in the part of the eye known as the corona and often results in blindness. It is thought to be associated in some way with tuberculosis. It has been found that by the use of cortisone the disease can be resolved almost immediately—that is in a few days.

Mr. HEDRICK. It is not trachoma?

Dr. MOUNTIN. No, sir. In the early days when bone tuberculosis was more common in the States you would find it but you don't see it now. It is still quite prevalent in Alaska.

INVESTIGATION OF INSECT CONTROL

We have worked on insects. Contrary to popular notion, insects at certain seasons of the year are very, very prevalent. Clouds of mosquitoes come off the thawing ice and snow waters up there. They become exceedingly dense at the very time of the year when outdoor activities are so necessary. On account of the short work season, they seriously interfere with operations. The ordinary methods of controlling these mosquitoes by means of ditching, drainage, and the use of larvacide on the water as used in this country, just are not applicable in this area. We have had to devise special methods using DDT to kill the adult mosquitoes in flight. The great problem is to get local control around small cities, around radar stations and around the Civil Aeronautics stations; also, the same problem exists around mining camps and various developments which usually are rather small in area.

We have been working on the biology of these insects, including the black fly and there is a small gnat—I cannot give you the exact scientific title—but it is called locally the noseeum. Just where they breed and how they propagate was not determined. We think we have some very valuable leads. They seem to breed on the bogs in the tidal areas and eventually we might be able to get some method of controlling them at the source.

SANITATION AND SANITARY ENGINEERING

I will mention some things we are doing in the way of sanitation or sanitary engineering. Mr. Hollis, perhaps, can describe this in more precise terms than I can, but I will give it to you in layman's language.

The frost goes quite deep into the ground up in Alaska and in certain parts of the country the ground is underlaid by what they call permafrost. One of the difficulties of developing a large community is to get a public water supply that can be piped to the houses. In some military establishments they have used the so-called utilidor where they put water, sewage and steam lines in an enclosed area down below the ground. That of course is not practicable for dispersed population in a civil community. It is too expensive and there are some difficulties because the heat thaws out the frozen ground and the utilidor sinks, so we have been working on a recirculating device recirculating the water and in that way keep it from freezing. We have a similar problem with sewer lines freezing.

We have conducted a number of studies to find out the critical depth at which sewer lines and water lines need to be to prevent them from freezing. We find that down around a certain critical depth the temperature does not vary so much in relation to that of the upper air.

It is just slightly below freezing when you get down below a certain critical depth but that differs somewhat in different areas, depending somewhat on soil conditions. We think the studies conducted along

those lines will make possible a public water supply which can be delivered to houses, and a public sewage system—a water-carriage sewage system—thus making possible the development of large civilian communities with public utilities comparable to those in temperate zones.

There are other problems on the disposal of wastes and sewage from detached homes. Materials are put out on the ground. They freeze in the wintertime and then thaw in the summer thus resulting in mass infection and pollution of the soil. We are working on chemical methods of digestion and sterilization of sewage from individual homes. A great deal of progress has been made. However, we haven't by any means completed the investigation, but very encouraging results have been obtained.

I will just give one or two more illustrations but will be glad to pursue the subject further if you wish.

STUDY OF ANIMALS IN ALASKA

There is a great deal of diarrhea and dysentery in the Arctic areas: normally those conditions are associated with warmer climates. Actually, they are more prevalent in cold climates than they are in most tropical areas, largely because of this problem of sanitation that I mentioned. Furthermore, Alaska has a number of reservoirs of infection in the animals that are used for food.

We are following out these various infections in an epidemological way, and then by going back to the animal reservoirs of infection it maybe possible to eradicate the condition at its source. If that is not possible, we at least will know the origin and then can institute measures along the way to lessen the hazard.

We are conducting some basic studies in physiology, starting with the animals that are indigenous to Alaska, finding out the normal mechanism of adaptation of these animals to cold, the changes that occur in their metabolism, the insulation that they put on in winter, and finding out how a number of these animals maintain body temperatures right out in the open country. Those are things that are being carried on, and when we have brought them to a conclusion, we may have learned how to live under arctic conditions.

Mr. HEDRICK. What animals are there that you are referring to?

Dr. MOUNTIN. The caribou, for example, and the bears and the fox and a number of small animals. Some of the fowls can keep their feet down in freezing water without apparent discomfort or damage. There is a tremendous animal population that reside in Alaska all the time. There are sea mammals in the very cold waters that get along very well and make a good adjustment. Whether they will give the necessary leads we are not sure, but such studies at least will add to scientific information and it is entirely possible it may have very immediate and practical application.

AIDING THE SOCIAL AND ECONOMIC DEVELOPMENT OF ALASKA

There are a lot of native plants that grow in Alaska. Some of them are used by the natives up there and others are not. Their nutritive value has not been determined. We are trying to find out

their nutritive value, feeling that the ultimate solution for the development of Alaska will depend, not upon importation of food from the United States or attempting to recreate a completely temperate condition in Alaska, but by learning processes of nature in those cold areas and the extent to which the Territory can be made self-sufficient in its economy. There in an area, as I recall, about one-fifth the size of the whole United States is one of the great outlets for population, and it has immediate strategic importance, as you all know. We feel that we should assist in the development of Alaska in a fundamental way, finding out the conditions that exist and then attempt to utilize the natural advantages and thereby bring about its enduring social and economic development.

RESEARCH ON LIFE IN COLD AREAS

Heretofore Alaska has just been a Territory to be exploited. In other words, its natural resources were utilized in a sort of get-rich-quick way, and then the person got out.

We should go at it in a more fundamental way and find out how to live in cold areas. What we find out there will be of benefit in other cold areas. Strange as it may seem, and this is the last statement I shall make, there has been very little research done on health problems or life in general in the lower temperature areas. Most of our research has been done in temperate and in tropical areas, and practically none in the low temperature areas. That is characteristic of all the research carried on throughout the world, and particularly with regard to the research in the United States.

POPULATION OF ALASKA

Mr. FOGARTY. Doctor, the population is increasing every year in Alaska, is it not? Have you any figures for us for the last five years or can you supply them for the record?

Dr. MOUNTIN. Population according to the 1950 Census is 128,643.

Mr. FOGARTY. What does that mean? That does not cover the military?

Dr. MOUNTIN. No; I am quite sure it does not. This is what the Census Bureau gives us for the population of Alaska, including the Eskimos and Indians. I tried to get figures on the white and nonwhite population, but the Census Bureau has not as yet separated the 1950 figures into those two groups. However, I do have the figures for the previous census, prepared by the Bureau of the Census. The 1940 census shows the total nonwhite population to be 33,354, which was 46 percent of the total population then.

Mr. FOGARTY. How many whites were there?

Dr. MOUNTIN. At that time the white population was 39,170 or 54 percent. I believe most of this increase has been in the white population but we won't know the exact facts until the detailed census figures for 1950 become available.

Mr. FOGARTY. You haven't any idea how many military personnel we have there?

Dr. MOUNTIN. I could not say.

TUBERCULOSIS RATE IN ALASKA

Mr. FOGARTY. What is the TB rate in Alaska?

Dr. MOUNTIN. The TB rate in 1949, which is the latest figures, was 181.6 per 100,000—that is the death rate.

Mr. FOGARTY. And what has been the national average on tuberculosis?

Dr. MOUNTIN. It was given by Dr. Anderson as 26.9, as I recall for the 48 States.

Mr. HEDRICK. What is the TB rate in Puerto Rico?

Dr. MOUNTIN. I don't have it. It is considerably higher than in the United States.

Mr. HEDRICK. It is not higher than Alaska?

Dr. MOUNTIN. I could not say. I can supply it for the record.

Mr. HARLOW. Dr. Anderson gave it. It was over 100. As I recall, the figures he gave were a little over 150.

Dr. MOUNTIN. However, I should say our figures of the death rate are not too reliable in Alaska because, for example, we find that 30 percent of the deaths were not certified by a physician. In other words, physicians did not see the patients in the last illness. It may be higher or lower than that, when we get the true picture. That is one thing we are doing now. We want to get more precise information on what the true disease problem is in the Territory.

Mr. FOGARTY. What was the rate 5 years ago?

Dr. MOUNTIN. I don't have it.

Mr. FOGARTY. Can you get it for us?

Dr. MOUNTIN. Yes; I will insert it in the record.

(The data requested are as follows:)

According to the best information we can get, there were 276 deaths from tuberculosis in 1944, 278 in 1945, 273 in 1946, 222 in 1947, and 244 in 1948.

ALASKA'S CONTRIBUTION TO THE HEALTH PROBLEM

Mr. FOGARTY. What is Alaska itself doing to cope with this health problem?

Dr. MOUNTIN. The appropriations in the Territory for this year are $464,472, and the local contributions amount to $54,200, or a total of $518,672—that is for over-all services.

Mr. FOGARTY. Have you any figures for 5 years ago? When did we get into this program—3 years ago?

Dr. MOUNTIN. Yes, sir; this is the third year.

Mr. FOGARTY. Do you have any figures on what Alaska was spending 3 years ago?

Mr. THOMPSON. I don't have it. I would have to get it separated for you.

Mr. FOGARTY. You say in your justification that since this special Alaska program was initiated the Territorial appropriations increased by 71 percent.

Dr. MOUNTIN. I am sure that is based upon actual figures.

Mr. FOGARTY. Will there be any change in this program if Alaska becomes a State in the United States?

Dr. MOUNTIN. Well, I would think there probably would not be immediately. I could not imagine that much would happen by just

being transformed from a Territory to a State. The basic health problems of the people would remain the same and I am not sure that any added funds would be made available, although I am not sure what would be involved in being transformed from a Territory to a State.

Mr. HARLOW. One of the reasons these people embarked on this program was that the formula of the grant under which we allocated funds to the States was not adequate to take care of the Alaskan situation, so that would not change if Alaska became a State.

TUBERCULOSIS CONTROL

Mr. FOGARTY. Are you making any headway on tuberculosis control?

Dr. MOUNTIN. I don't have the figures to back it up, but we think the program that is now in effect should make headway. The Territory has added to its sanitorium capacity. There is an extensive BCG vaccination program under way, a case-finding program, and a general health program. They have been adding to the staff of nurses and other technologists, together with clinics that should, according to our expectations, result in a reduction with time. The tuberculosis rate is not affected dramatically, in that it is a chronic disease. It develops gradually and it takes a decade to make a substantial difference, particularly when you try to effect a reversal—thus it takes some time to see results.

Mr. FOGARTY. You have to make some fundamental changes in sanitation, and the people there must have facilities to take care of the infection, those infected.

Dr. MOUNTIN. That is right, and the economic situation is such that with the crowding and the influx in population, the disease has been spreading. Housing conditions are not good. The whole economy of the Territory hasn't been built up to the level that we find here in the United States but some of the present unsatisfactory conditions will be remedied as we go along.

Mr. FOGARTY. Cost of construction is up and it is almost prohibitive, I understand.

Dr. MOUNTIN. Yes, sir; construction costs are very high.

ACTIVITIES OF THE DEPARTMENT OF AGRICULTURE IN ALASKA

Mr. FOGARTY. Is the Department of Agriculture doing any research up there?

Dr. MOUNTIN. They have two agricultural stations that I know of, and I visited both of them. I cannot describe in detail what they are doing except in a broad way to determine the plants that can be grown. They are working with varieties of grains and vegetables.

Mr. FOGARTY. How do you know whether there is any duplication of the work you are doing on plants and animals?

Dr. MOUNTIN. The work we have been doing has been on the food value of indigenous plants and not attempting to develop new varieties. Also our work is in regard to the nutritional requirements of the people living in low temperature areas. No, there is no duplication, no duplication at all. The one complements the other.

TAX RATE OF ALASKA

Mr. HEDRICK. Do you know the tax rate in Alaska?

Dr. MOUNTIN. I could not tell you.

Mr. HEDRICK. Do they pay no taxes?

Dr. MOUNTIN. I do not know that.

Mr. HARLOW. I have heard some people up there say, for example, that the per capita appropriation for health services is much higher in the Territory than it is in any of the States.

Mr. HEDRICK. I wonder if you could supply such information for the record?

Mr. HARLOW. Yes, sir.

(The data requested are as follows:)

The per capita Territorial appropriation for health services in 1950 in Alaska (excluding hospital care) was $1.47 as opposed to a national average for State appropriations of 58 cents.

TREATMENT OF TUBERCULOSIS

Mr. HEDRICK. In the treatment of tuberculosis what cooperation do you get from the people?

Dr. MOUNTIN. As far as I know the cooperation is good insofar as being willing to take treatment, but what you can do in an Eskimo hut with a large family living in very crowded quarters is very little. There is not much that can be done about accomplishing isolation in an Eskimo hut.

Mr. HEDRICK. Are they willing to go to the sanatorium?

Dr. MOUNTIN. Yes; as a rule you get cooperation from them that is very good.

Mr. HEDRICK. How many beds do they have in the sanatorium?

Dr. MOUNTIN. I cannot answer it. I will supply it.

(The data requested are as follows:)

There are a total of 444 hospital beds available for the treatment of tuberculosis patients.

Mr. HEDRICK. I have been told that most of them that go to the sanatorium there, they run away and go back home. Is that true?

Dr. MOUNTIN. That is not my impression.

Mr. HEDRICK. That is all, Mr. Chairman.

Mr. FOGARTY. Have you any questions, Mr. Schwabe?

Mr. SCHWABE. No questions.

ARMY HEALTH PROGRAM

Mr. BUSBEY. There is just one question. Doesn't the Army-Navy, and Air Corps have a program in operation in regard to sani, tation and health matters?

Dr. MOUNTIN. They do not have it for the civil population. They concern themselves only with the military, on military reservations, or, in the case of troops, when they are out on maneuvers over the Territory.

Mr. BUSBEY. What coordination exists between your Department and the Defense Establishment?

Dr. MOUNTIN. There is very close cooperation, particularly in research work. The work that the Army is doing on the clothing and the food and other things for the military is made available to our people working on our research, but we are concerned primarily with the general population whereas the Army is interested in the military.

Mr. BUSBEY. That is all, Mr. Chairman.

I might say the Indian Service also has quite a program there.

Dr. MOUNTIN. Yes, the Alaskan Native Service does have quite a program.

Mr. BUSBEY. Are not the Indians natives?

Dr. MOUNTIN. Yes, sir, and the Aleuts also, the third group.

Mr. BUSBEY. I would like to ask another question: What difference do you think has come about in regard to the health conditions of the Eskimo since the white man went into that Territory?

Dr. MOUNTIN. I could not answer that. I don't think we have any data on the death rate and the health conditions in those days as compared with today and what the pressure was on the food supply.

Mr. BUSBEY. I was just wondering if under their primitive methods of native living, if they did not have a much less death rate than they do at present?

Dr. MOUNTIN. I am afraid I could not answer it now.

Mr. FOGARTY. Thank you, doctor.

FEBRUARY 23, 1951.

DENTAL HEALTH ACTIVITIES

WITNESSES

DR. BRUCE D. FORSYTH, ASSOCIATE CHIEF, BUREAU OF MEDICAL SERVICES

M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

DENTAL HEALTH ACTIVITIES

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$1,780,000	$2,090,000	$1,750,000
Unobligated balance, estimated savings	−15,952		
Savings under sec. 1214		−135,150	
Obligations incurred	1,764,048	1,954,850	1,750,000
Comparative transfer from—			
"Hospitals and medical care, Public Health Service"	17,323		
"Operating expenses, National Institutes of Health, Public Health Service"	39,993		
"Salaries and expenses, Public Health Service"	53,156		
Total obligations	1,874,520	1,954,850	1,750,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Grants to dental schools and other institutions and to individuals for research and training:			
(a) Research projects	$196,857	$221,000	$221,000
(b) Research fellowships	34,912	50,000	50,000
2. Direct operations:			
(a) Research	247,835	339,200	337,750
(b) Other direct operations:			
(1) Review and approval of research and training grants	8,893	11,050	12,500
(2) Technical assistance to States	1,261,745	1,148,500	943,650
(3) Coordination and development of dental resources	70,479	125,000	125,000
(4) Administration	53,799	60,100	60,100
Total obligations	1,874,520	1,954,850	1,750,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
Total number of permanent positions	296	284	222
Full-time equivalent of all other positions	3	2	2
Average number of all employees	245	235	215
01 Personal services:			
Permanent positions	$1,066,243	$1,125,864	$1,036,406
Part-time and temporary positions	16,176	10,450	10,450
Regular pay in excess of 52-week base	2,403		2,287
Payment above basic rates	7,816	7,472	7,405
Totol personal services	1,092,638	1,143,786	1,056,548
Deduct charges for quarters and subsistence	1,440	1,440	2,700
Net personal services	1,091,198	1,142,346	1,053,848
02 Travel	277,959	253,570	187,630
03 Transporation of things	10,909	6,625	6,625
04 Communication services	3,354	5,475	4,995
05 Rents and utility services	1,697	1,780	1,780
06 Printing and reproduction	6,163	7,400	5,450
07 Other contractual services	78,183	116,632	91,232
08 Supplies and materials	91,471	102,524	92,299
09 Equipment	81,817	47,318	34,575
11 Grants, subsidies, and contributions	231,769	271,000	271,000
15 Taxes and assessments		180	566
Total obligations	1,874,520	1,954,850	1,750,000

Mr. FOGARTY. Dr. Forsyth, do you have a statement for the committee?

Dr. FORSYTH. I do not have a prepared statement, Mr. Chairman and members of the committee, but I would like to make a few remarks.

Mr. FOGARTY. You may proceed.

GENERAL STATEMENT

Dr. FORSYTH. The dental health of the people, as you know, is of paramount importance at all times. During an emergency, this takes on added significance. This was sharply brought into focus during World War II. You may recall that in the early days there were a high number of rejections due to dental defects.

Mr. FOGARTY. Do you have that number?

Dr. FORSYTH. Yes. I can give it to you. About one out of five rejections were due to dental defects. This caused a reduction in standards.

The admission of large numbers of people into the Armed Forces with serious dental defects demanded that one-third of all practicing

dentists serve in the Armed Forces during the last war. This also produced a serious shortage of dental services for civilians. I am sure that all of you recall the difficulty in securing an appointment during the last war.

At the present time, as I am sure you realize, the Federal Treasury is burdened with the cost of dental care for beneficiaries of the Government from the last war. For example, the cost to the Veterans' Administration for contract dental services totaled approximately 40 million dollars last year. This did not include the cost of dental services rendered in hospitals—I am talking about Government hospitals, Veterans' Administration and other Government hospitals.

Today we are faced with an identical problem, shortage of dental officers, increased demand for services in the Armed Forces, and continuing and forever increasing financial burden on the taxpayers. That will continue probably for years to come.

In our limited budget in the Public Health Service, the dental activities are confined to efforts to resolve these problems. There are two major hazards to dental health, pyorrhea and tooth decay. Tooth decay is the most prevalent of all diseases afflicting the youth of our Nation today. The average 16-year-old, for example, has nine decayed teeth and has lost several teeth due to lack of adequate care.

Tooth decay leads to such things as toothache, pain, abscesses, focal infection, extractions, and possible disfigurement. These cause loss of time from work, in vital industries and school, and from active duty in the Armed Forces.

Pyorrhea on the other hand is a major hazard to adults. I think it is perfectly safe to say that without preventative or control measures that one can predict that the children of today will have lost half of their teeth by the time that they reach the age of 40.

I am sure it was mentioned here last year that over $1 billion is being spent annually for dental health services in the United States. Yet less than 30 percent of the people receive anything like adequate dental care. That means that over 70 percent of them receive little or no care, so that the shortage of dental health services makes it apparent that we cannot solve the problem by providing dental care alone. Our only hope, I think, of resolving the problem is to discover effective methods of preventing and controlling dental diseases.

The Public Health Service is attacking the problem just that way, through basic developmental and applied research. Our basic research findings are taken out in the field and field tested, with pilot programs and clinical trials.

PROGRESS OF DENTAL ACTIVITIES

Mr. Chairman, I would like to give you a brief progress report on our dental activities during this past year and I would like to take them up according to the way they are in the budget before you.

Mr. FOGARTY. You may proceed.

RESEARCH GRANTS

Dr. FORSYTH. Under our grants project, which is first: Although this is a relatively new project, I feel that it has stimulated considerable interest in research in the dental schools and other institutions.

Under our present budget we have been able to support a limited number of projects and if you would care for it we have a list of the projects that we have been able to support.

Mr. FOGARTY. Put it in the record.

(The information is as follows:)

Dental research grants currently paid from fiscal year 1951 funds by State and institution

Grant No.	Investigator	Institution	Amount approved	Project title
Colorado: D-90	Clapper	University of Colorado.	$5,991	A study of the prevalence of a specific type of lactobacillus in noncarious and carious individual.
Connecticut: D-103	Fleming	Yale University.	2,646	Study of the heterologous and homologous transplantation of tooth-germ elements. To determine the effect of environmental changes on the growth of tooth germs or tooth buds. To study the transplantability of salivary gland tumors, anatomically and biologically.
District of Columbia:				
D-12 (C4)	Hayes, Booker (6-month period).	Howard University.	2,997	Relation of Vitamin C to periodontal disease.
DG-12 (C5)	Hayes, Booker.	do	6,750	Do.
Total			9,747	
Georgia: D-112	Lewis	Emory University.	8,694	Endocrinological factors in periodontal disease.
Illinois: D-4 (C2)	Blayney	University of Chicago.	19,478	To determine the value of adding sodium fluoride to a communal water supply for the purpose of reducing tooth decay in school children.
D-32 (C2)	Jarabak, Thompson.	Northwestern University.	6,031	Effect of abnormal muscular tensions upon the sites of growth of the cranium and face.
D-68 (C)	Koser	University of Chicago.	3,861	Oral lactobacilli associated with dental caries.
D-11 (C4)	Schour	University of Illinois.	9,720	Establishment of a quantitative method of indexing gingival disease.
D-15 (C3)	do	do	10,000	Histopathology of gingiva in systemic disease.
D-30 (C2)	Tilden	Northwestern University.	7,500	Differentiation of acidogenic bacteria in human saliva.
D-26 (C)	Sarnat	University of Illinois.	3,456	Facial growth.
Total			60,046	
Indiana: D-3 (C4)	Phillips	Indiana University.	3,218	Studies on relation of solubility to hardness of tooth enamel.
Massachusetts:				
D-54 (R)	Manly	Tufts College.	9,828	Study of chemistry of dental silicates.
D-21 (C3)	Shaw	Harvard University.	2,916	Relation of calcium and phosphorus deficiencies during development of molar teeth to initiation and progress of carious lesions in rodents.
D-28 (C2)	Sognnaes	do	3,235	Studies on organic elements of enamel.
D-91	Stein	Mount Holyoke College.	2,050	Study of malocclusion with special reference to heredity.
D-5 (C4)	Zander	Tufts College.	5,292	Pulp reaction to heat.
D-94	Margolis	do	5,000	Relationship between muscle forces and dental facial anomalies.
D-100	Keyes	Harvard University.	2,970	Development of a semipurified ration for Syrian hamsters satisfactory for reproduction growth, and development of caries susceptible teeth.
Total			31,291	

Dental research grants currently paid from fiscal year 1951 funds by State and institution—Continued

Grant No.	Investigator	Institution	Amount approved	Project title
Michigan:				
D-14 (C3)	Hunt, Hoppert.	Michigan State College.	$4,267	Heredity as a factor in causation of caries in rats.
D-47 (C2)	Peyton	University of Michigan.	4,239	Operating characteristics and efficiency of dental handpieces.
Total			8,506	
New Jersey: D-70 (R)	Feltman	Passaic General Hospital.	9,917	Prenatal and postnatal ingestions of fluoride salts.
New York:				
D-36 (C-2)	Addelston	New York University.	10,983	X-ray diffraction studies of the structure of normal and treated enamel of teeth.
D-29 (C2)	Bevelander	do	3,159	Studies in calcification.
D-33 (C2)	Bibby	Eastman Dental Dispensary.	6,172	Caries-producing potentialities of foodstuffs.
D-50 (C2)	Butcher, Taylor.	New York University.	3,510	Study of effects of experimental denervation and ischemia on teeth in dog and monkey. Study the living pulp in rat incisor.
D-19 (C3)	Karshan	Columbia University.	9,088	Studies on the etiology of periodontoclasia.
D-84 (R)	Levy	do	5,184	A study of bone and tooth development as influenced by vitamin B deficiency.
D-55 (C)	Sobel	Jewish Hospital of Brooklyn.	12,204	Composition of teeth and its relation to human caries.
Total			50,300	
Oregon: D-53 (C)	Everett	University of Oregon.	4,852	Effect of alloxan diabetes on incidence of caries in hamster and clinical and laboratory examination of caries susceptibility in human diabetes before and after treatment.
Pennsylvania:				
D-107	Cox	University of Pittsburgh.	3,000	Relation of developmental factors, other than nutritional, to tooth form in the rat.
D-87 (R)	Krogman	University of Pennsylvania.	8,324	Establish cranio-facial growth norms during changing dentition.
Total			11,324	
Virginia: D-93	Kreshover	Medical College of Virginia.	8,320	Prenatal influence on development of teeth and supporting structures.
Grand total			214,852	

NOTE.—This list does not include those applications pending payment in the immediate future.

Dr. FORSYTH. I will give you a couple of examples of the projects. One is the study of the organisms that are associated with tooth decay and methods for eliminating them, and another is the part that vitamins and foods play in pyorrhea and other dental diseases.

Are there any questions on that?

Mr. FOGARTY. Why do you not go right through, then we will ask questions.

RESEARCH FELLOWSHIPS

Dr. FORSYTH. Under our research fellowships, which comes up next, fellowships are awarded to promising graduates for development of research careers in dental health. One of the important results

here has been the interest demonstrated by dental students in dental research as a career. This is a new program too, and very few have completed it, but I think it is important to note that every one of those who have completed it have gone into research or into teaching positions.

Under this program available funds will allow us to support 15 fellows, 9 of them continuing in their second year of support and 6 new fellows out of about 30 applications.

Mr. FOGARTY. How are they selected?

Dr. FORSYTH. Strictly on a merit basis; grades that they made in school, and so forth. Applications come up before a board, so that we select the better ones.

Mr. SCHWABE. Grades they made in dental school, you mean?

Dr. FORSYTH. Yes.

FLUORIDATION STUDIES

Under direct operations, fluoridation studies at Grand Rapids, Mich., and many of you are familiar with that, are continuing in the sixth year. I am happy to announce it was through findings from that program and from those at Newburgh, N. Y., Sheboygan, Wis., and Marshall, Tex., and Evanston, Ill., that we can now recommend that communities fluoridate their water supplies with an assurance that a two-thirds reduction in tooth decay in children can be effected. It is my opinion that this is the most important discovery of our times. It is also my opinion that it is the most important preventive measure brought out since the pasteurization of milk over 40 years ago. Besides having the approval of the Public Health Service, fluoridation of communal water supplies has the approval of such health organizations as the American Public Health Association, the American Dental Association, the State and Territorial Health Officers Association, the State dental directors, and many individual State dental societies. It also has the approval of the American Water Works Association.

Mr. DENTON. Would you tell me just what that is? I am new to this committee.

Dr. FORSYTH. Fluoridation of the water supply?

Mr. DENTON. Yes.

Mr. FOGARTY. Why do you not tell him about the topical application of sodium fluoride?

Dr. FORSYTH. Would you care to have me tell you now?

Mr. DENTON. You do it the way you want to.

Dr. FORSYTH. With your permission, sir, I would like to briefly go through these, then we will go back and take them up item by item.

Mr. DENTON. I didn't know what it was. I will be on the lookout for it.

Dr. FORSYTH. We do feel, however, that studies are necessary for the older age groups. We found in the Colorado Springs area, where water is naturally fluoridated, that there is a 75 percent reduction in tooth loss, as compared to tooth loss in nonfluoridated areas. If this program can be further developed a marked reduction in the dental needs for future members of the Armed Forces and civilians alike will result, but it is going to have to continue.

In another study, still under direct research, we found that a new compound of fluorine, namely sodium fluorosilicate, could cut the

cost of fluoridating public water supplies down from about 12 cents per person per year to about 4 cents per person per year. That is, at current market prices.

During the past year, under research, a new medium has been developed for the growth of bacteria which are associated with tooth decay. Now this is important because this new medium will allow State and other laboratories to more effectively diagnose dental conditions.

I think it is of interest to note that one of the research associates of the American Dental Association, Dr. Edward Hampp, while working at our Public Health Services facilities, has developed an improved method for the isolation and cultivation of an organism known as borrelli vincenti. This organism is commonly associated with trench mouth. That disease, I am sure a good many of you are familiar with it, has been a considerable military problem. For Dr. Hampp's work in this field he received the 1951 biological award from the Washington Academy of Science. In addition, still under research, we are presently studying the effect of radiation on dental diseases, and the resistance to infections beginning in the mouth.

I would like to go back to the fluoride study at Grand Rapids, Mich., and two defluoridation projects we have at Bartlett, Tex., and Britton, S. Dak. Besides being interested in the benefits that are derived from fluoridating water supplies, we are also concerned with such things as equipment costs, type of equipment needed, cost of operation, type of tests that must be made, safety measures that must be instituted, and chemical tests that are involved in the procedure.

SODIUM FLUORIDE APPLICATIONS

I am happy to report that progress is being made in the topical application of sodium fluoride, development of more effective techniques, simplification of techniques, streamlining procedures, and here I would like to point out that we have found by using the multiple chair technique we can treat four children in the time it previously took to treat one child.

We are concerned too with the development of mass application methods which could be applied at minimum cost. Again, we have made progress in this field. We have found that dental hygienists working under supervision can apply this treatment. When we first started out it was felt that only dentists could do this.

On the topical fluoride program, during 1950, 39 teams demonstrated topical fluoride program in 215 communities. Approximately 200,000 school children received a series of fluoride applications; 250 community programs were established. as a direct result of these demonstrations, and about 100 have made plans to make this service available.

To date there are 450 communities which have established continuing topical fluoride programs.

This program has demonstrated the usefulness of dental hygienists, and has increased a demand for their services. I think it is important to note that during the past 3-year period, hygienist training schools have almost doubled in the United States. I think we can take partial credit for it from this type of program.

OTHER EXAMPLES OF RECENT WORK

In studying the problem of dental care for children, we have two projects, one at Woonsocket, R. I. and one at Richmond, Ind. and in the study of care for adults at our own service hospitals we have two, one at Kings Point, Long Island, and one at Norfolk, Va. Progress is being made here in the use of auxiliary personnel, such as dental hygienists, dental technicians and dental assistants. I can report that preliminary results point to the probability that dental services rendered by dentists can be doubled by the use of multiple equipment and chairside assistants, properly trained.

We also during the past year developed and field-tested a simplified record form for rapid determination of dental needs and dental care. We have completed an investigation concerning the importance of dental X-ray and dental diagnosis. Our findings here have supported findings of other individuals that at least 25 percent of dental conditions go undiagnosed without the use of dental X-ray.

Lastly, we are in the process of studying, in cooperation with the American Dental Association, the financial status of dental schools. This was specifically done at the request of the American Dental Association and American Association of Dental Schools.

Mr. Chairman, I believe that gives you a report of our work to date.

BACKGROUND ON THE TOPICAL APPLICATION OF SODIUM FLUORIDE

Mr. FOGARTY. Will you tell us now for the benefit of the committee about the discovery of the topical application of sodium fluoride to children's teeth in the various ages, how long it has been in effect, and so forth, and the results?

Dr. FORSYTH. That is a good example of basic research findings being carried out into the field for field demonstration. As you know, Dr. Knutson, who is here in the room, did a lot of the original work in the topical applications of sodium fluoride. It was found that a 40-percent reduction in new caries would be effected by this method.

Mr. FOGARTY. Tell us how the method was discovered and what the ages of the children are; how it is applied, and so forth.

Dr. FORSYTH. The proper time to apply it, if you are to begin with the young child that never had it and follow that child, is at the ages of 3, 7, 10, and 13. There are a series of four applications each. Would you like to go through the process of how it is done?

Mr. FOGARTY. Yes.

Dr. FORSYTH. There does not need to be a complete dental prophylaxis given to the child, but the teeth should be cleansed before the first application. That is the accumulation of debris and stain is taken off and the teeth are isolated with cotton rolls, and you can do it either a quadrant at a time or an upper and a lower quadrant at a time. The teeth are dried, then the solution is applied and allowed to dry on the teeth. It takes about 3 or 4 minutes to dry.

Mr. HEDRICK. What strength solution do you use?

Dr. FORSYTH. Two percent solution. Then the patient is dismissed. There are four applications necessary. On the remaining three applications, it is not necessary to cleanse the teeth. The teeth are

again isolated, fluoride is applied, allowed to dry and the child dismissed. There are four applications in all.

Ordinarily it takes a 20-minute period to apply this solution, but by using a multiple chair technique, four chairs lined up one behind another so that you can go from one patient to another while the solution is drying, we cut down the time and treat four children now in the same time we treated one child before.

This has been demonstrated, as I said, to thousands of school children who received benefits from it.

It was felt by Congress that this was so important that the money would be specifically allocated for demonstrating it in the States. Those States that received teams had to apply through their local and State health department to the Public Health Service.

Mr. FOGARTY. Did we not appropriate enough money for a team in every State 2 years ago?

Dr. FORSYTH. Yes; at that time you did.

Mr. FOGARTY. Three years, it was?

Dr. FORSYTH. Three years ago, but not all States have applied for it.

Mr. FOGARTY. What States have not applied for it?

Dr. FORSYTH. I can give you the list of the States in which we have demonstrated.

Mr. FOGARTY. Can you give us also a list that have not?

Dr. FORSYTH. We will have to furnish that.

Mr. FOGARTY. All right.

(The information is as follows:)

STATES AND TERRITORIES IN WHICH TOPICAL FLUORIDE DEMONSTRATION UNITS HAVE OPERATED

Alabama	Maine	South Carolina
Arizona	Maryland	South Dakota
Arkansas	Massachusetts	Tennessee
Colorado	Michigan	Vermont
Connecticut	Mississippi	Virginia
Delaware	Missouri	Washington
District of Columbia	Nebraska	West Virginia
Florida	Nevada	Wyoming
Georgia	New Hampshire	Alaska
Illinois	New York	Hawaii
Indiana	North Dakota	Puerto Rico
Kansas	Oklahoma	Virgin Islands
Kentucky	Pennsylvania	
Louisiana	Rhode Island	

STATES WHICH HAVE NOT REQUESTED THE DEMONSTRATION UNIT

California	New Jersey	Oregon
Idaho	New Mexico	Texas
Iowa	North Carolina	Utah
Minnesota	Ohio	Wisconsin

Mr. FOGARTY. Why have they not applied?

Dr. FORSYTH. You may recall that we had some difficulty in some of the States about using dental hygienists. To use them in some States required a change in State laws. In several instances State laws were actually changed allowing hygienists to apply fluorides. At first only dentists were allowed to do so in some States. Why some of the States haven't applied, I couldn't actually tell you, Mr. Chairman.

Mr. FOGARTY. How many States have taken advantage of it?

Dr. FORSYTH. Forty States and Territories. We had 39 teams in operation in 1950.

Mr. FOGARTY. Tell us about the fluoridation of this drinking water now.

Dr. FORSYTH. On the fluoridation of communal water supplies Dr. Dean, who is also in the room, has done a lot of work on the study of fluorides and it was found that naturally occurring fluorides prevented tooth decay to a certain extent and we found that in a city such as Aurora, Ill., where 1 part of fluorine per million parts of water was prevalent, it cut down the tooth decay tremendously. What we were interested in was to find out whether or not this happened if you artificially fluoridated communal water supplies, so 5 years ago a study was started at Grand Rapids, Mich., artificially fluoridating the water. Muskegon acted as a control. They both had the same source of water supply, and it was through this study, just this past year, that we have been able to endorse fluoridation. Because of the benefits found in children we feel that now communities should go ahead and fluoridate, even though this study must be continued to see how much benefit is received in older age groups.

As I say, this is continuing in its sixth year in Grand Rapids now.

Mr. FOGARTY. What have been the results of that 5-year experiment?

Dr. FORSYTH. Well, in order to receive the maximum benefits an individual must be in the area fluoridated from birth onward.

Benefits that are received later on, we are not too sure of. We know there are some, but they would be minimum as compared to the maximum.

Mr. FOGARTY. What would be the cost per person?

Dr. FORSYTH. The cost per person depends upon the type of material used. If it is sodium fluoride, that would run about 12 cents per person per year. If you use some other method of securing the fluorides, such as sodium fluorosilicate, it would cut the price down to about 4 cents per person per year.

Mr. FOGARTY. I think in Rhode Island, the Rhode Island Medical Society has approved the fluoridation of the city water supply; the Rhode Island Dental Society has, and it seems to me they have come up with 10 cents per person, to be borne by the city.

Dr. FORSYTH. We have the list of cities as of January 1 that are now fluoridating their water supply.

Mr. FOGARTY. Put that in the record.

(The information is as follows:)

Some of the cities in the United States that are fluoridating their water supplies (January 1951)

City and State	Date started	Population 1950	City and State	Date started	Population 1950
New Britain, Conn		73,663	Bloomer, Wis	August 1950	2,557
Salisbury, Conn		3,076	Columbus, Wis	August 1950	3,230
Southbury State School, Connecticut	April 1945	3,799	Edgar, Wis	November 1949	707
Newark, Del	1950	6,701	Elkhorn, Wis	April 1948	2,917
Gainesville, Fla	1950	26,577	Evansville, Wis	March 1950	2,530
Lewiston, Idaho	June 1947	12,910	Edgerton, Wis		3,495
Evanston, Ill	February 1947	73,030	Fond du Lac, Wis	July 1950	29,918
Ottawa, Kans	September 1946	10,051	Fort Atkinson, Wis	December 1949	6,257
Belchertown State State School, Massachusetts	1946	3,486	Hartford, Wis	January 1950	4,545
Monson State Hospital, Massachusetts		6,139	Janesville, Wis	February 1949	24,829
Wrenthan State School, Massachusetts	1946	5,357	Madison, Wis	June 1948	95,534
Algonac, Mich	September 1949	2,607	Marshfield, Wis	September 1950	12,377
Grand Rapids, Mich	January 1945	175,647	Mayville, Wis	do	2,995
Ludington, Mich	December 1949	9,066	Menasha, Wis	August 1950	12,360
Midland, Mich	January 1946	14,202	Middleton, Wis	June 1950	2,101
Morristown, N. J	1950	17,078	Mukwonago, Wis	May 1949	1,203
Newburgh, N. Y	May 1945	31,924	Neenah, Wis	March 1950	12,361
Charlotte, N. C	April 1949	133,212	Oregon, Wis	February 1950	1,323
Ninety Six, S. C		1,558	Oshkosh, Wis	January 1950	40,872
Aberdeen, S. Dak	December 1950	20,976	Phillips, Wis		1,790
Marshall, Tex	May 1946	22,255	Port Washington, Wis	September 1950	4,754
Corpus Christi, Tex	March 1950	108,053	Racine, Wis	March 1950	70,749
Wheeling, W. Va	September 1950	58,447	Reedsburg, Wis	February 1950	4,078
Weirton, W. Va		24,193	Rhinelander, Wis	May 1950	8,720
Antigo, Wis	June 1949	9,897	Richland Center, Wis	December 1949	4,614
Appleton, Wis		33,892	Sheboygan, Wis	February 1946	42,485
Ashland, Wis	October 1949	10,589	Soldiers Grove, Wis	January 1950	
Baraboo, Wis	May 1949	7,217	Stevens Point, Wis	1950	16,550
Beloit, Wis	April 1949	29,541	Stoughton, Wis	September 1949	4,813
			Sun Prairie, Wis	March 1950	2,262
			Waupun, Wis		6,725
			Watertown, Wis		12,393
			West Bend, Wis	August 1950	6,844

MOBILE DEMONSTRATION TEAMS ON SODIUM FLUORIDE

Mr. FOGARTY. Now in these mobile demonstration teams which we have at the present time, how may teams are operating now in 1951?

Dr. FORSYTH. Now there are a little over 30.

Mr. FOGARTY. In 39 States?

Dr. FORSYTH. I think it is 31 operating.

Mr. FOGARTY. In 30 States?

Dr. FORSYTH. No; I am not sure of the number of States. It is less than 30 States, because we have in some States possibly two teams.

Mr. FOGARTY. And how many members do you have in these 30 teams?

Dr. FORSYTH. Would you like the personnel assigned to topical fluoride? I can give that to you.

Mr. FOGARTY. Yes.

Dr. FORSYTH. In the beginning of fiscal 1951 we had 156 people, but at present we have 124.

Mr. FOGARTY. Have you got the 1950 figures there?

Dr. FORSYTH. I haven't got 1950.

Mr. FOGARTY. Will you get the 1950 figures and then add them to the record, and give us 1951 and 1952?

Dr. FORSYTH. Yes.

Mr. FOGARTY. Give us 1951.

(The information requested is as follows:)

Personnel assigned to topical fluoride teams

Fiscal year—	Number
1950	156
1951	124
1952	80

Dr. FORSYTH. Topical fluoride, 140.

Mr. FOGARTY. For 30 teams?

Dr. FORSYTH. Well, Mr. Chairman, if you divide that by 4 I think you would come out with 35 teams, but as you know, there is a gradual reduction, so that although we started the fiscal year with 39 teams, we will wind up the fiscal year with less than 35.

Mr. FOGARTY. What is their physical make-up?

Dr. FORSYTH. The physical make-up is one dentist, two dental hygienists, and a clerk. The clerk-typist keeps the records of the patients coming in.

Mr. FOGARTY. You had 140 in 1951. How many are you going to have in 1952?

Dr. FORSYTH. During 1952 we will be down to 80; down to 20 teams.

Mr. FOGARTY. This demonstration will gradually be eliminated as the local communities pick it up?

Dr. FORSYTH. Yes, sir.

Mr. FOGARTY. When do you anticipate we will be out of this business?

Dr. FORSYTH. I couldn't set a definite date on it, Mr. Chairman, but we had hoped that we would have sufficient demonstration so about 5 or 6 years from the time it started we could stop it entirely.

Mr. FOGARTY. This is the third year of operation, in 1951?

Dr. FORSYTH. Yes.

Mr. FOGARTY. You are going into your fourth year in 1952?

Dr. FORSYTH. I believe that is right.

Mr. FOGARTY. How much will be spent for these 30 teams in 1951? What is the total cost.

Dr. FORSYTH. For the 30 teams in 1952, $460,281; that is a reduction from the amount in 1951, $793,161.

APPLICATION OF SECTION 1214 REDUCTION

Mr. FOGARTY. You had available in 1951, $2,090,000, and you had deducted from that $135,150 under that section 1214.

Dr. FORSYTH. For 1951? No, Mr. Chairman.

Mr. FOGARTY. Total appropriation.

Dr. FORSYTH. Oh, yes, sir.

Mr. FOGARTY. Where did you apply that cut of $135,000?

Dr. FORSYTH. $125,000 of that came out of technical assistance to States which is the topical fluoride program chiefly. We felt that since this was a deemphasized program, that we would just accelerate the reduction a little more rapidly. That was the best place to take the cut, we thought.

Mr. FOGARTY. Where is the other $10,000?

Dr. FORSYTH. $3,600 in research, $1,200 in administration, $4,000 in grants, and $1,350 in review and approval of grants, totaling $135,150.

REQUEST FOR 1952

Mr. FOGARTY. And you had a minus $12,000 for a nonrecurring item on passenger vehicles, which left you a total of $1,942,850 and you are asking this year for $1,750,000, which shows a decrease of $192,000, and a decrease of 22 positions?

Dr. FORSYTH. That is right.

Mr. FOGARTY. Are they all applied against the technical assistance to the States?

Dr. FORSYTH. No, sir; all but two are.

Mr. FOGARTY. Where are the other two?

Dr. FORSYTH. One is a consultant position and the other one is a departmental employee, a scientific writer. That shows up in the back part, and one, as I said was a dental hygienist in the regional office.

Mr. FOGARTY. Dr. Hedrick?

AUDIT OF RESEARCH GRANTS FUNDS

Mr. HEDRICK. Doctor, in these grants to medical or dental schools and other institutions and individuals, how do you keep track of that money? What becomes of it; what is accomplished?

Dr. FORSYTH. We get a report. It is a simplified report that is sent in as to what they have done.

Mr. HEDRICK. Do you have something you can put in the record on that?

Dr. FORSYTH. I believe that is handled by the Division of Research Grants, and they should be able to supply it to you when they come up to testify.

Mr. HEDRICK. How many dental school projects do you have?

Dr. FORSYTH. During the past year we had 34 projects going at 24 institutions. We have a list of projects by the way if you would care to have that in the record.

Mr. HEDRICK. Yes. It would be all right to have that.

Mr. FOGARTY. Yes.

(NOTE.—See insert earlier herein.)

Dr. FORSYTH. You might be interested to know that this has been a very worth-while project, and we have had a lot more applications than we have had money to allocate for projects. We feel this has been a very limited budget. Actually it is estimated we will have about $385,000 worth of approved projects in the grants field, but we will only have money for about $56,000 in new projects. That means there will be about $331,000 that we will not be able to pay out because of lack of funds.

NEW STUDIES

Mr. HEDRICK. Have you started any new projects recently?

Dr. FORSYTH. Yes, sir. We have started one, a study of the dental care of adults, at Kings Point, N. Y., and Norfolk, Va., at our own service hospitals.

Mr. HEDRICK. What did that study consist of?

Dr. FORSYTH. Use of auxiliary personnel, such as dental hygienists, assistants and dental technicians. There is such a workload, such a shortage of dentists that we have to find some way and we feel there

is a possibility of extending the treatment by the proper use of auxiliary supporting personnel and multiple equipment.

EFFECTS OF DIFFERENT PROCEDURES AND PRACTICES ON TOOTH DECAY

Mr. HEDRICK. Do you believe these ordinary mouthwashes that are advertised and used by the public generally are of any benefit?

Dr. FORSYTH. Well, Dr. Hedrick, I would say that they do have some benefit, but only psychologically. Anything that will stimulate an interest in people taking care of themselves from an oral hygiene standpoint is of benefit.

Mr. HEDRICK. Which mouthwash in your experience has been the most effective?

Dr. FORSYTH. Are you speaking of commercial or of any mouthwash?

Mr. HEDRICK. Which one would you recommend?

Dr. FORSYTH. Salt and soda is as good a mouthwash as any.

Mr. HEDRICK. How about adding a little sugar to it?

Dr. FORSYTH. Oh, no.

Mr. HEDRICK. I remember many years ago that was highly recommended for a gargle, salt, sugar, and soda.

Dr. FORSYTH. I don't know what the sugar would add.

Mr. HEDRICK. It was supposed to soften up the lining of the mucuos membrane.

Dr. FORSYTH. I think it might be well to add a little flavoring agent. People would like to use it a little more frequently possibly.

Mr. HEDRICK. Has it been your experience that people who use tobacco do not suffer with decayed teeth as readily as those that do not?

Dr. FORSYTH. Are you talking about smoking or chewing?

Mr. HEDRICK. Chewing; either one.

Dr. FORSYTH. Chewing, yes. You will even find this in some cases, that tooth decay will have become arrested from using chewing tobacco. We don't know whether it is the tobacco or the cleansing of the teeth by the chewing.

Mr. HEDRICK. The germs do not like the presence of the tobacco juice.

Mr. SCHWABE. Nicotine.

Mr. HEDRICK. And how, that is correct, I believe. I have known that for many years. People that chew tobacco especially do not suffer with decayed teeth. Of course, their teeth are dirty and discolored, but they do not have the cavities.

Dr. FORSYTH. You do find that. I have seen some tobacco chewers where their teeth are worn right down to the gums by the abrasives in tobacco.

Mr. HEDRICK. Smoking cigars and cigarettes does not have that direct effect?

Dr. FORSYTH. Of what?

Mr. HEDRICK. The same as chewing, because you do not get that lye in your mouth, to saturate the teeth as much as where they chew tobacco.

Dr. FORSYTH. Not as effective as chewing.

Mr. HEDRICK. I guess that is all.

Mr. FOGARTY. Mr. Denton?

EFFECTIVENESS OF FLUORINE TREATMENT

Mr. DENTON. About this treating water with fluorine, I gather that you simply treat the water at the filter plant, or reservoir, with fluorine just the same as they do cholrine?

Dr. FORSYTH. Much like it.

Mr. DENTON. I did not get what you said as to the effectiveness of that.

Dr. FORSYTH. From evidence we have we feel sure that about a two-thirds reduction in tooth decay will be effected.

Mr. DENTON. I noticed that list. Comparatively few towns have taken advantage of it here.

Dr. FORSYTH. Well, it takes a while to get plans through. In any city, they have to get approval from a council or the governing body and have to buy the equipment and install it, but I am not sure what the number is in this list. To date there are about 60 cities fluoridating.

Mr. DENTON. Most all of them are from Wisconsin in that list.

Dr. FORSYTH. A good many are; about 40 out of 60 are, but a good many are in the process of making plans to fluoridate. The city of Washington itself is. You may have read the article in last night's Star. It was on the front page of the second section. We can make it available to you if you would like to have it.

Mr. DENTON. I can find it.

Dr. FORSYTH. It was in last night's Star.

Mr. DENTON. This treating of children's teeth, how effective would that be, would you say?

Dr. FORSYTH. Topically, 40 percent reduction.

Mr. DENTON. I think that is all.

Mr. FOGARTY. It is the first discovery of anyone working in research on dental caries made. It was the first thing that they have ever come up with that would prevent caries in children's teeth, but they do not know the effect on grown persons and that is the study they are making today?

Dr. FORSYTH. That is right.

Mr. FOGARTY. This was the first discovery ever made on the prevention of caries in children's teeth; this application of sodium fluoride?

Dr. FORSYTH. Yes.

Mr. FOGARTY. Mr. Schwabe?

RESEARCH ON FLUORIDATION OF COMMUNAL WATER SUPPLY

Mr. SCHWABE. I was a member of this committee 3 years ago when the committee first recommended and the Congress approved an appropriation for, I think, a million dollars for this topical fluoride program. At that time, as I understand it, one of the other gentlemen, not you, in charge of it at that time——

Mr. FOGARTY. Dr. Knutson.

Dr. FORSYTH. Dr. Knutson is directly in charge of that operation, Mr. Schwabe.

Mr. SCHWABE. Yes, sir; and it was new at that time, so far as recommended results were concerned, and proven results.

Dr. FORSYTH. Well, that is right.

Mr. SCHWABE. And as I recall, this prevention of tooth decay in children, you are pretty thoroughly convinced that your tests were positive and effective, but you were not so sure about your fluoridation of source of water supply?

Dr. FORSYTH. That is true.

Mr. SCHWABE. And community supply of water, and so forth, and that was true, notwithstanding the fact that the fluoridation of the communal water supply of water long preceded your research and experimentation with the decay of children's teeth and the prevention thereof by this method that you described; is that correct?

Dr. FORSYTH. Yes.

Mr. SCHWABE. And now you are still conducting research more or less and studies for the community supply of water and fluoridation thereof, are you not?

Dr. FORSYTH. Yes. The Grand Rapids study, for instance.

Mr. SCHWABE. And you are not quite sure of what results you would be able to promise along that line as you are with reference to the prevention of the child tooth decay?

Dr. FORSYTH. Yes, for children. This has been in effect 5 years. We are now beginning to go into the sixth year. We followed them from birth up to their sixth year period. They are beginning to get their permanent teeth.

If you are talking about the permanent teeth, we don't know how much more result we are going to get in that, no. We do want to carry that on until we find out even through into adults.

Mr. SCHWABE. And 3 years ago, as I understood Dr. Knutson, perhaps it was, presented this subject to this committee. They were not at all sure about how effective it would be so far as prevention of decay in the teeth of adults.

Dr. FORSYTH. Which?

Mr. SCHWABE. This fluoride application.

Dr. FORSYTH. Yes.

Mr. SCHWABE. And the water fluoridation, communal fluoridation, of course is still up in the air as far as adults are concerned; is that correct?

Dr. FORSYTH. That is true. We are in the process of studying it.

Mr. SCHWABE. You are convinced there is some beneficial effect, but how much is problematical?

Dr. FORSYTH. We know there is a benefit.

Mr. SCHWABE. But you cannot measure that very well, can you, as to adults?

Dr. FORSYTH. Not as yet, except in places where they have been on naturally fluoridated water, Colorado Springs, as I mentioned, but we would not know whether or not that will be true in cities artificially fluoridating.

Mr. SCHWABE. Do you think that is due entirely to the natural fluorination out there?

Dr. FORSYTH. I can't tell you for sure yet.

Mr. SCHWABE. That is what I wanted to find out.

Dr. FORSYTH. That is why we have to continue studying the adults.

Mr. SCHWABE. There may be something else there that is contributing to the prevention of decay.

Dr. FORSYTH. Well, Mr. Schwabe, the Public Health Service has had the reputation—I don't know whether it is good or bad—of being ultra conservative before making unqualified statements. Therefore we feel we should study all of these things well before endorsement. However, we felt fluoridation so important from a child's point of view that we recommended it as soon as we were safe in doing so.

Mr. SCHWABE. And Colorado Springs is not the only point where you have discovered natural fluoridation that may be beneficial?

Dr. FORSYTH. That is right.

Mr. SCHWABE. You find that, do you not, in Arizona?

Dr. FORSYTH. Certain parts of the southwest section, yes, sir.

Mr. SCHWABE. And out there in some of those Indian reservations, with the sympathies we give to them and all that, there are schools requiring the children to wash their teeth regularly. They drink that native water out there. We sometimes call it "gyp" water, erroneously.

They found there was less decay in children's teeth there than many other places; is that not correct?

Dr. FORSYTH. I am not sure about that. I would like to tell you that we do have a topical fluoride team working on the Indians and it happens to be in Oklahoma right now. You might be interested to know, too, that the Public Health Service has loaned five or six of our commissioned officers to the Indian Service. One of these is acting as chief dental officer, and five have just recently gone on duty.

Mr. SCHWABE. Do you know the focal points from which they will operate?

Dr. FORSYTH. The chief dental officer will be assigned to the Denver, Colo., area.

Mr. SCHWABE. You do not know with reference to Oklahoma, where the team is operating?

Dr. FORSYTH. No, sir.

Mr. SCHWABE. I thought they might be operating out of one of those Indian hospitals there.

Mr. FOGARTY. It will not take long to find out, will it?

Dr. FORSYTH. No.

Mr. SCHWABE. I am curious to know so I can continue to observe it.

(The information requested is as follows:)

Topical fluoride demonstration unit assigned to Anadarko, Okla. area office during the last week of January 1951. From February 7 to 19 it was assigned to Lawton, Okla., and since February 19 has been operating in Concho, Okla.

Dr. FORSYTH. I would very much like to have you see the team in operation.

Mr. SCHWABE. We have hospitals in a few points in Oklahoma, Indian hospitals, and I wondered if they were going to operate out of those hospitals, so to speak?

Dr. FORSYTH. I am familiar with your State. I served for 2 years at El Reno, at the reformatory there and I know the Cheyenne and Rapaho Indian reservation just north of town.

Mr. SCHWABE. We don't have many hospitals over in that section. There is one small one there close.

FURTHER DISCUSSION OF OPERATIONS OF TOPICAL FLUORIDE DEMONSTRATION TEAMS

Well now with reference to this program, as I understood you and as presented the first time by Dr. Knutson, the idea was to organize these teams and popularize this movement as rapidly as possible, with good judgment, and so forth.

I have observed somewhat the operations of this program because I was so vitally interested in it here, having been on the committee when it was first authorized and appropriated for.

You spoke of a normal team, consisting of 4 persons.

Dr. FORSYTH. That is true.

Mr. SCHWABE. There is a dentist and two dental hygienists and a clerk-typist, or somebody to make the recording; is that right?

Dr. FORSYTH. Yes, sir.

Mr. SCHWABE. In recruiting these people, this personnel, of course I have doubted if it was necessary to have this typist. I think that ordinarily you can get the dentists to use their hygienists to do their bookkeeping and the little typing they have in their office. That is a matter of practice; is it not generally?

Dr. FORSYTH. No, sir. That is too expensive, we feel, to use a dental hygienist for. They are usually paid a little more than a clerk.

Mr. SCHWABE. You did not get very high priced ones to start with on this program; did you?

Dr. FORSYTH. No; we tried to keep the cost down all the way through.

Mr. SCHWABE. And dentists, you did not get too high priced ones, but got them right out of schools?

Dr. FORSYTH. No; we get them as reasonably as we can.

Mr. SCHWABE. It was my experience that they came right out of school and went into these traveling teams and went to work.

Dr. FORSYTH. Not before they were given an indoctrination course in the procedure.

Mr. SCHWABE. As explained before by Dr. Knutson, and I think you will agree, as I have had my dentist explain to me time and again, that did not take much time—that indoctrination course. It is a very brief course?

Dr. FORSYTH. Yes, sir.

Mr. SCHWABE. It was testified to, I think, that you did not really have to be a dentist to know how to apply it. You could train anybody, your dental hygienist, because you have explained about the whole process today; have you not?

Dr. FORSYTH. That is right. I also mentioned the fact that we found by using dental hygienists under supervision they could apply the treatment.

Mr. SCHWABE. You found they could apply it very nicely, after being trained, without much supervision as far as that was concerned because there wasn't much supervision after they were taught this method of application; is that right?

Dr. FORSYTH. That depends upon your State law.

Mr. SCHWABE. I am talking about as a matter of practice. I am not talking about the State law. I have not compared the State law. I can see how that might be.

Now the dentist, as a general matter, what is his attitude toward this?

Dr. FORSYTH. They are using it in their offices.

Mr. SCHWABE. And they are using other things, too; are they not?

Dr. FORSYTH. That is right.

Mr. SCHWABE. Other solutions with this, and different from this?

Dr. FORSYTH. Well, I am not sure about that.

Mr. SCHWABE. They are using this to some extent or were using it before it was ever popularized by your group; were they not?

Dr. FORSYTH. Topical fluorides?

Mr. SCHWABE. Yes.

Dr. FORSYTH. To some extent.

Mr. SCHWABE. And especially those dentists who were taking care of children's teeth, who specialized more in that work; is that not right?

Mr. FORSYTH. Well, actually, Mr. Schwabe, the benefits of this had not been proved until Dr. Knudson completed his studies.

Mr. SCHWABE. I admit they had not been proved and you had no statistical information extant upon which to base conclusions.

Dr. FORSYTH. That is right.

Mr. SCHWABE. But dentists were using it here and there with some degree of frequency?

Dr. FORSYTH. I would say not very extensively.

Mr. SCHWABE. What else are they using now that many of the leading dentists think are just as effective?

Dr. FORSYTH. I don't know of a thing.

Mr. SCHWABE. I thought a moment ago you said they were using other preparations in conjunction with this fluoride and perhaps to its exclusion.

Dr. FORSYTH. You may have in mind such things as Gottlieb's solution, which had been used to some extent in the Southwest. That has not proved of any benefit.

Mr. SCHWABE. As many others have not, perhaps.

Dr. FORSYTH. That is true. There are always experiments being conducted.

Mr. SCHWABE. And should be.

Dr. FORSYTH. Yes.

Mr. SCHWABE. But are there not some other preparations, if I may use that term as a layman, that are being used now that you know of besides this fluoridation application?

Dr. FORSYTH. There are none that I know of that are effective.

Mr. SCHWABE. Well, their effectiveness may yet be proven after experimentation, such as was made with fluoridation; is that not correct?

Dr. FORSYTH. That is true.

Mr. SCHWABE. How far do you think you have gotten along with the popularization of it; that is, where it will be used to the maximum recognized benefit to everybody?

Dr. FORSYTH. Well, for instance, in the State of Illinois we have pulled out and Mr. Busbey may be familiar with the fact that the State now is operating three teams of its own, besides some local community programs that have started.

Mr. SCHWABE. And some cities or communities are doing more or less the same thing; are they not?

Dr. FORSYTH. That is the thing we want them to do.

Mr. SCHWABE. I hope you have inspired them to that, but I am just saying they are, as a matter of fact, are they not, beginning to do considerable of that on their own?

Dr. FORSYTH. Yes. As I mentioned, 450 communities to date have started topical fluoride programs.

Mr. SCHWABE. Are you, through these grants to States and assistance to States, using any of these funds to contribute to Illinois now since it has gone on its own?

Dr. FORSYTH. Under "Assistance to States, general?"

Mr. SCHWABE. Yes.

Dr. FORSYTH. No.

Mr. SCHWABE. For this fluoridation program in Illinois?

Dr. FORSYTH. No, sir: no money is being contributed.

Mr. SCHWABE. And when a State reaches that graduating point so to speak, they get out from under your observation to the extent that you don't furnish them any more money; is that right?

Dr. FORSYTH. They can apply under "Assistance to States, general" for funds.

Mr. SCHWABE. That is what I am trying to get at.

Dr. FORSYTH. But I am sure you are familiar with the fact that money is not earmarked for specific projects in that. It is lumped into a general fund and the money available to a State is on a competitive basis. In other words, such dramatic things as heart and cancer programs; you have difficulty competing with them.

Mr. SCHWABE. But so far as this program is concerned now, when the State gets to the point where you say Illinois has, when it reaches that State where they take over the program themselves, then do you contribute any money toward the maintenance of that program?

Dr. FORSYTH. We do this. We contribute, for instance, some equipment, to help them get going.

Mr. SCHWABE. What is that?

Dr. FORSYTH. A station wagon, for instance, to transport their personnel, and frequently the State will take over the personnel of the team that is situated there.

Mr. SCHWABE. You just get out from under it just as much as you can and as fast as you can?

Dr. FORSYTH. As soon as it has been completely demonstrated.

Mr. BUSBEY. If the gentleman will yield, I take it the gentleman from Oklahoma, Mr. Schwabe, is living in the hopes that the remainder of the States will progress in the very near future to the point where the State of Illinois is today.

Mr. SCHWABE. And even outstrip you.

Dr. FORSYTH. That is what we would like to see.

Mr. SCHWABE. I hope you will gradually graduate them and as soon as you can. I think it is a worth-while program, Doctor, but I don't like to see it continued indefinitely and unnecessarily and I want to offer every encouragement and inspiration I can to see you stimulate them to take on these responsibilities and assume them as rapidly as possible and as completely as possible. That is the burden of my talk with you.

Dr. FORSYTH. As you know, it was never the intent from the beginning that this be a continued program from there on.

Mr. SCHWABE. That is why I want to find out how far you are living up to the intent of this committee and the Congress, to make it as short a program as possible—commensurate with maximum results, of course.

Dr. FORSYTH. I think you can see from the budget before you that we are cutting down as rapidly as we possibly can.

Mr. SCHWABE. I don't know whether you are or not. That is the reason I am talking to you. I want to know that you are anyhow.

Dr. FORSYTH. I feel that with the money that has been spent by the Government it would be a catastrophe, really, to pull out before these communities have received enough demonstrations so they will continue the programs because with the shortage of manpower that we have today, and the need for services to these people, if we pull out before, there is an indirect implication, whether you believe this or not, that there is a deemphasis on this type of program and we wouldn't want that to happen.

FEELING OF DENTISTS TOWARD THE PROGRAM

Mr. SCHWABE. There would not be any disposition, would there, on the part of the dental profession, because of the fact that this is an inexpensive item or operation, we will say, to fail to give the necessary time and impetus to the ongoing of the program; do you think? There was some disposition, it was feared, I think by your service here to start with, that dentists might not want to go ahead because the materials, for instance, were so inexpensive, and it was merely a little service that could be applied very rapidly or quickly and therefore they wouldn't get much compensation for the service because no time or no energy and no material was involved, so to speak. That was brought out in hearings here before and I want to know how you are getting along with that problem.

Dr. FORSYTH. I think the question is answered by the facts on the States in which we have demonstrated—we couldn't go into the State without the approval of the local and State dental societies.

Mr. SCHWABE. I think you could, but we emphasized we wanted you to go into every State as rapidly as you could, go through the schools, go any way in the world you wanted to to get there, but of course try to have the cooperation of the dental profession.

Dr. FORSYTH. That is right.

Mr. SCHWABE. I think that is the attitude of this committee now, so far as that is concerned.

Dr. FORSYTH. We have had that, sir.

Mr. SCHWABE. You have gotten very good cooperation, have you, from the dentist organizations?

Dr. FORSYTH. That is what I believe; that is right.

Mr. SCHWABE. That is what I am trying to get at and do you think there will be the disposition on their part—it may be a little repetition here, but do you think there is any indication that the dentists will not want to carry on this program and let you get out from under, so to speak, on account of the fact that the material used in the fluoridation program here is not expensive, and the services so insignificant as far as time and skill is concerned?

Dr. FORSYTH. If I understand your question correctly, do you mean——

Mr. SCHWABE. Dentists just will not want to fool with it.

Dr. FORSYTH. They would rather the Federal Government did it for them?

Mr. SCHWABE. They just don't want to fool with it because they cannot make enough money out of it to live on.

Dr. FORSYTH. That is not true.

PROGRESS TOWARD MASS-FLUORINATION FOR CHILDREN

Mr. SCHWABE. In the hearings before, 3 years ago, when we started this thing that question was uppermost in our minds, among other things, and we were told if I recollect, and I think the record will bear me out, that probably very soon this might be given by the school nurses, these applications, and I know you are speaking very cautiously, understanding some dentists, but seriously how far have you gone along with that, just letting school nurses handle this program?

Dr. FORSYTH. Again, that is up to the individual States.

Mr. SCHWABE. How far have you gone along to inspire that sort of a mass innoculation, may I call it, here of school children?

Dr. FORSYTH. Again, we would have to go back to the fact that you have to get State laws changed in certain States. That was necessary in some States even to get dental hygienists to apply the solution.

Mr. SCHWABE. There is no State in which the legislature meets, let us say, less than biannually and a lot of them meet annually and some are almost constantly in session.

Dr. FORSYTH. I am not sure about that.

Mr. SCHWABE. I do not think there is a State in the Union where the legislature does not meet every 2 years and many of them every year, and many of them now periodically through the years, and do not wait for a whole year to expire because we have got new programs; they are on salaries, and one thing another now. How many of these State laws have gotten into conformity with your program where you could have the school nurses, for instance, handle that program? Do you have any idea?

Dr. FORSYTH. No, but I do know out of 450 community programs that are now going that some of them are hiring dental hygienists to do it in the schools and some of them are hiring dentists and some are hiring both.

Mr. SCHWABE. That is what I am trying to get at. Are you making progress along that line with the mass fluorination program for the children?

Dr. FORSYTH. Yes; as I said, we are making progress in that direction.

Mr. SCHWABE. When I say are you making progress, I mean any marked progress. Is it really going along all right?

Dr. FORSYTH. I think, topical application programs in 450 communities; several States have favorably changed their dental practice laws in these 3 years' time; the fact that dental hygiene schools have almost doubled in the past 3-year period; all of these indicate we have increased the services or the demand for this preventive service. Prior to the topical fluoride program some States did not have hygienists available, some wouldn't allow them to practice, and generally the situation has improved, suggesting distinct progress has been made.

Mr. SCHWABE. I certainly hope so.

PREVENTION OF DECAY OF THE TEETH OF ADULTS

You have not anything new to come up that we can put our teeth insofar as the prevention of decay to the teeth of adults is concerned? That is still in such an experimental state of research that you cannot tell?

Dr. FORSYTH. That will take time, and as fluoridation is continued, the children that are born today, as they go on through into adult life will have benefits of it.

Mr. SCHWABE. Have you made studies of communities in which there is natural fluoridation in water supply, such as Colorado Springs and certain places in New Mexico and Arizona and so forth, to comparable pathological condition of the teeth of adults as compared with other communities where there is no natural inoculation of the water with fluorine?

Dr. FORSYTH. We know this: That the appearance of the teeth are improved; we know that the tooth decay is cut down and we know that the tooth loss is greatly reduced.

Mr. SCHWABE. In those communities where there is water that has natural impregnation of fluoridation?

Dr. FORSYTH. That is right. There was, for instance, the study in the 35- to 44-year-old age group, there was a 75-percent reduction in tooth loss. That is most important.

Mr. SCHWABE. That is all.

Mr. FOGARTY. Mr. Busbey.

Mr. BUSBEY. Mr. Chairman, I have no question because I think everything has been covered fairly well, but I certainly would not want to be charged with not taking advantage of the opening Mr. Schwabe gave the doctor for bringing out the fine word of the State of Illinois in this program and holding it up as a model for the other States to follow.

Dr. FORSYTH. Thank you. We are very proud of Illinois.

EFFECT OF COLA DRINKS ON TEETH

Mr. HEDRICK. I wonder if you could tell just what effect the cola drinks have on the teeth.

Dr. FORSYTH. Mr. Chairman, there was, you know, a little publicity of the fact that the American Dental Association and the dental section of the American Public Health Association, have passed resolutions discouraging the sale of candy, soft drinks, and other confections in schools. It was picked up and they were accused of just picking on the cola drinks but that was not true. It was all candy—confectionery as well as all soft drinks that are sweetened beverages.

Mr. HEDRICK. You know it is phosphoric acid in cola drinks that causes trouble. Sugar does not cause trouble. Phosphoric acid affects the enamel on the teeth.

Dr. FORSYTH. Any acid will affect the enamel on the teeth.

Mr. HEDRICK. Citric acid?

Dr. FORSYTH. Yes.

Mr. HEDRICK. It would have to be a strong application?

Dr. FORSYTH. Yes. I have seen, for instance, a boy, a child, I would say around 9 years of age, that I examined that had been sucking lemons, for instance, and it looked as though he had used a knife and sort of sliced off layers of the enamel; perfectly polished, but it was just disappearing.

Mr. HEDRICK. Do you know the action of phosphoric acid on the enamel of teeth? Have you made a study of it?

Dr. FORSYTH. I don't know the reaction.

Mr. HEDRICK. Did you ever drop an extracted tooth in a bottle of cola drink to see what happened to it?

Dr. FORSYTH. I haven't personally. I have in acid and the enamel entirely disappears.

Mr. HEDRICK. What kind of acid?

Dr. FORSYTH. Hydrochloric acid.

Mr. HEDRICK. In your opinion cola drinks don't affect teeth any more than some other soft drinks?

Dr. FORSYTH. I would say all of them should not be used.

Mr. FOGARTY. Thank you very much, doctor. Did you have anything further you wanted to add?

Dr. FORSYTH. No, sir.

FEBRUARY 23, 1951.

HOSPITAL CONSTRUCTION PROGRAM

WITNESSES

DR. JOHN W. CRONIN, CHIEF, DIVISION OF HOSPITAL FACILITIES
ROY L. HARLOW, CHIEF FINANCE OFFICER
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY

GRANTS FOR HOSPITAL CONSTRUCTION

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$40,000,000	$110,000,000	$195,000,000
Applied to contract authorization	−40,000,000	−100,000,000	−120,000,000
Contract authorization	150,000,000	150,000,000	
Prior year balance available:			
Appropriated funds			10,000,000
Contract authorization	59,764,302	91,881,485	
Total available for obligation	209,764,302	251,881,485	85,000,000
Balance available in subsequent year:			
Appropriated funds			−5,000,000
Contract authorization	−91,881,485	−10,000,000	
Unobligated balance, savings under sec. 1214: Contract authorization		−75,000,000	
Contract authorization not required for obligation	−13,661		
Total obligations	117,869,156	166,881,485	80,000,000

Obligations by activities

Grants for hospital construction:	
1950	$117, 869, 156
1951	166, 881, 485
1952	80, 000, 000

Obligations by objects

11	Grants, subsidies, and contributions:	
	1950	$117, 869, 156
	1951	166, 881, 485
	1952	80, 000, 000

Salaries and Expenses, Hospital Construction Services

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$1, 208, 500	$1, 357, 000	$1, 220, 000
Unobligated balance, estimated savings	−6, 942		
Savings under sec. 1214		−100, 000	
Obligations incurred	1, 201, 558	1, 257, 000	1, 220, 000
Comparative transfer to—			
"Salaries, Office of Administrator, Federal Security Agency"	−2, 735		
"Salaries and expenses, division of service operations, Federal Security Agency"	−39, 985		
"Salaries and expenses, Public Health Service"	−24, 525		
Total obligations	1, 134, 313	1, 257, 000	1, 220, 000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Operations and technical services activities	$1, 037, 101	$1, 159, 348	$1, 121, 993
2. Administration	97, 212	97, 652	98, 007
Total obligations	1, 134, 313	1, 257, 000	1, 220, 000

Obligations by objects

Object classification		1950 actual	1951 estimate	1952 estimate
Total number of permanent positions		185	195	195
Full-time equivalent of all other positions		3	3	
Average number of all employees		181	191	186
01	Personal services:			
	Permanent positions	$970, 610	$1, 066, 310	$1, 067, 121
	Part-time and temporary positions	15, 254	15, 250	
	Regular pay in excess of 52-week base	3, 371		3, 579
	Total personal services	989, 235	1, 081, 560	1, 070, 700
02	Travel	84, 290	100, 000	90, 000
03	Transportation of things	6, 356	7, 000	6, 500
04	Communication services	2, 717	4, 000	3, 400
05	Rents and utility services	27		
06	Printing and reproduction	19, 450	20, 000	15, 000
07	Other contractual services	8, 650	9, 600	9, 500
08	Supplies and materials	9, 950	20, 000	15, 000
09	Equipment	13, 638	14, 725	9, 900
15	Taxes and assessments		115	
	Total obligations	1, 134, 313	1, 257, 000	1, 220, 000

Mr. FOGARTY. Dr. Cronin, do you have a statement for the committee?

GENERAL STATEMENT

Dr. CRONIN. Mr. Chairman, I have no formal statement. I would like to make a few remarks, however, with your permission.

This program, popularly known as the Hill-Burton program, operates under the Hospital Survey and Construction Act of August 13, 1946, as amended by subsequent laws from the Seventy-ninth Congress up through the Eighty-first Congress. The major amendment was Public Law 380, of the Eighty-first Congress, which was passed on the 25th of October, 1949. I would like to take a minute to review the history of the legislation.

HISTORY OF LEGISLATION

Prior to World War II in the period of gearing up for World War II it became necessary to review the needs of this country in regard to general community facilities in the war-impacted areas. One of those community facilities needs was the need for hospital services. The Lanham Act was passed at that time to take care of these needed community facilities during the emergency period of the war. In general the Lanham Act was serviceable as far as hospitals are concerned. However, it did point out that there was a definite need for some long-range planning in regard to hospitals for this country.

It had been known for many years that the hospital needs of the country were very great, and had not been met. During the depression years very few hospitals had been built. Those hospitals built were usually Government hospitals. The reason for that was there was not free money to put into the building of hospitals and it was not done.

During the war years the materials were not available for the building of hospitals, because the materials were going for our Army and armament and other defense items of the country. So it was in 1942, after the passage of the Lanham Act, that the leaders in the hospital field of the country, backed up by the American Hospital Association, American Medical Association, American public health officials, and other recognized leaders, conceived the idea that a specific survey of the hospital needs of the country should be made.

That was done by an organization under the auspices of the American Hospital Association and was known as the Commission on Hospital Care. It took that group 2 years under the leadership of Dr. A. C. Bockmeyer of the University of Chicago Clinic, who is an able and competent hospital administrator, to complete their studies.

At the end of that time, and based on those studies, and with the support again of the American Medical Association, and the American Hospital Association, Congress had introduced into the hopper, to speak, supported by various Members of Congress, led by Senator Hill, of Alabama, and Senator Burton, of Ohio, the junior Senator from Ohio at that time and now Supreme Court Justice, the so-called Hill-Burton bill. This later became on August 13, 1946, Public Law 725 of the Seventy-ninth Congress.

As you know that law provided for a program of survey in regard to the need of our hospitals in this country, and the need for hospital services. It provided a method of acquiring those hospital services, which in short, was an example of how the State, the local community, and the Federal Government could cooperate in order to accomplish a common goal which was the supplying of hospital beds and services.

This law provided, first, for contract authority every year for a period of 5 years of $75,000,000. It provided the program would run for a period of 5 years, from August 13, 1946, until 1951. It provided that each year the Public Health Service, which had the administration of the program from the Federal aspect, would appear before Congress and justify the expenditures for the coming year.

So although we had the contract authority of $75,000,000 every year for a period of 5 years, we had to come in annually for the cash to do the job.

Now after that program had been in operation for a period of 3 years, there were certain aspects of the program which it was felt needed changing. I might say in the original version, which is Public Law 725, the money, the $75,000,000, was allotted to the States on the basis of a formula, the controlling factors of which are per capita income and population. It provided also that no project would be granted greater than one-third Federal money for the construction of a project.

The States, prior to the receiving of money, had to conduct a survey, again, with the financial assistance of the Federal Government on a matching basis, one-third to two-thirds. The total amount of money allotted to any State for this purpose was based on its population. That money was for survey purposes. The State in turn with the help of the Federal Government, surveyed their hospital needs by breaking their States down into hospital service areas. These geographically consisted of one county or two counties, or a county and a half. An inventory of the hospital beds, kind of hospital beds in their community, was made. The needs were established on the basis of the formula prescribed in Public Law 725, which briefly is this, that the Federal Government would help the States to build, not to exceed four and a half beds per thousand for general hospitals, two beds per thousand for chronic diseases, five beds per thousand for mental diseases and two and a half beds for average annual deaths from TB over a set 5-year period of 1939–44. So knowing the basic rule, as far as the Federal participation was concerned, knowing what was in the State, the State then was able to set up priorities of construction projects.

That was done. The law required each State to have a State plan. It required the State plan to be approved by the Surgeon General, and also required that that State plan be revised mandatorily each year. All of the States have those State plans and all of them have been getting them revised each year, and approved by the Surgeon General. As a result of such a program, functioning for 3 years, it was determined that some of the "A" priority areas that needed hospitals were not able to come up with two-thirds of the money necessary to match the one-third Federal share and as a result Public Law 380 was passed by the Eighty-first Congress which permitted the

States to abandon the one-third, if they so desired, Federal participation and set up their own Federal share. That Federal share participation across the country now is averaging approximately 47 percent, as compared to the one-third. The States plan range between one-third to two thirds Federal participation on any one project. It also gave the States two choices. They could either take a flat rate for every project in the State, some place between the one-third and the two-thirds, or they could take a sliding scale for the projects in the State dependent upon the economic situation of the community in question, and the need for hospitals, and other relevant factors.

Only five States have taken the sliding scale. The rest of them have established a flat rate for all the projects in their State. Of course, the Federal law permitted an increase in Federal share. It had to provide an increase in the total contract authority due to the provision permitting an increased Federal share. The new contract authorization was $150,000,000 annually from October 25, 1949, which included fiscal year 1950, to June 30, 1955. That legislation was unusual in that it gave permission and also at the same time appropriated money in the amount of the additional $75,000,000. The life of the program was extended to June 30, 1955.

PROGRESS OF THE PROGRAM

As a result, the State allotments were increased, and many more projects were gotten under way. Now the program has been moving rather successfully, with some definite features which I will mention later. Last year we reported to you that as of December 31, 1949, the Surgeon General had approved 1,020 projects, of which 662 were under contract, or construction contracts were about to be awarded. These projects were to provide between 49,000 and 50,000 beds. We can now report that as of January 31, 1950, there were 1,497 projects approved; 867 of which are under construction or contracts are about to be awarded; 382 of the 1,497 have been completed and are open and operating.

Mr. FOGARTY. What was that number again?

Dr. CRONIN. It is 382, and the remaining 248 are in the various preconstruction phases of developing their plans and getting ready for final approval.

These approximately 1,500 projects will provide approximately 73,000 urgently needed hospital beds, and 225 public health centers in this Nation. The substantial increase in the number of projects is due in a large part to the action of the Eighty-first Congress in accelerating this program by doubling the amount of contract authorization and providing the total of $150,000,000.

FINANCING PROVISIONS AND OBLIGATIONS

The contract authorization as you know was originally established at $150,000,000 for 1951, and was subsequently reduced to $75,000,000, pursuant to the requirement of section 1214 in the Omnibus Appropriation Act. This was partially restored in the waning days of the Eighty-first Congress; in fact on the last days of that Congress an additional $10,000,000 was appropriated, making the total for fiscal year 1951 the sum of $85,000,000.

As you know the Senate voted to restore the total of $75,000,000 as an amendment to an appropriation act. The House did not see fit to do so, and the bill went to conference. The conferees agreed that they would appropriate $10,000,000; thereby making a total amount of money available in 1951 of $85,000,000.

In terms of dollars these 1,497 projects represent a total cost to exceed a billion dollars' worth of construction, of which the Federal share is $357,000,000. We have prepared a chart showing the status of the program to December 31, 1950. This chart is accumulative in its aspects, and I think is self-explanatory. As you can see here, this represents allotments, the appropriations received, or rather contract authority received from Congress, in $75,000,000 for 1948, $75,000,000 for 1949, accumulative, then we take the big jump for fiscal year 1950 to $150,000,000. We carried the same amount for 2 months in the 1951 fiscal year because Congress did pass a resolution that permitted the Federal Government to operate on the same basis as they operated in fiscal year 1950. That was a little bit complicated as you know because we made our allotments, after clearing with our General Counsel and the Comptroller General, on the basis of $150,000,000 to the States. So the States for a period of 2 months, and we for a period of 2 months, July and August, and the first 12 days of September, of this past year, operated on the basis of $150,000,000 contract authorization and $150,000,000 appropriation for 1951. That is reflected in this short period here. Then on September 12, through the action of the Budget Bureau at the direction of the President in cutting this program back by placing $75,000,000 in reserve, we again dropped that $75,000,000. We carried on then until January 2, when we gained $10,000,000; to date there has been a total of $385,000,000.

Of that $385,000,000 we have initially approved projects to cover $357,000,000 and we have finally approved projects which are projects under construction, to total $249,000,000. Now there is a time lag between the final approval of the project when the Government says "We will be a partner to the building of this project" and that project being put on the market for competitive bids of the lump-sum type, and the starting of construction. After the project is 25 percent completed the first Federal payment is made. In most instances it takes approximately a year to plan and complete a hospital, so there is a time lag then between the approval of the project and the time when the payments are made. At the present time we have paid out $126,000,000 toward this $294,000,000, which is the debt really that the Federal Government definitely has acquired.

NEED FOR CONTINUING THE PROGRAM

Now as we move along, we are justifying a request here this afternoon for $75,000,000 for fiscal year 1952 to be allotted to the States in accordance with the statutory formula utilizing population and per capita income as the controlling factors.

Now one might well ask, on what basis we would justify the expenditure of a single dollar for continuation of what might appear to be a business as usual program. In this connection I would like to point out that the original surveys made by the States for which the Federal Government set aside $3,000,000 and upon which the State plans are

based reveal that according to the States there is a national deficiency for normal peacetime operations of about 900,000 beds. We have to date under the program been able to approve projects which will add about 73,000 beds to the Nation's bed supply. Now construction of hospital beds of course has proceeded outside the program. We aren't the only hospital builders in the country. There are other groups building hospitals; church groups, State groups, and so forth, but the national deficiency is still estimated at around 839,000 beds for just a normal peacetime operation.

HOSPITAL BED SHORTAGES

Now I would like to refer to the second chart at this time, which portrays for you the hospital bed situation confronting the Nation. In the general hospital picture, the green represents the existing hospital beds, 60.9 percent of what we need in general hospitals we have. The red represents the specific need in the general hospital picture, or we lack 31.9 percent of what we normally need in this country for peacetime operation. The yellow represents the impact that the Hill-Burton program has had to date. In other words, we have cut down the need by 7.2 percent in the general hospital area. On the TB side of the picture, I might say now that the ratio of general hospital beds to TB hospital beds is about 1 to 4 in the State plans, but as you gentlemen realize, it is much easier for a community to build general beds and get contributions toward hospital campaigns to build general hospitals than it is to build just a TB hospital. As a result the way the program has developed, instead of building 1 TB bed to 4 general beds, we are running 1 TB bed to 12 general beds. We are doing our best to stimulate the States to catch up that difference in tuberculosis beds because we still feel as do the TB people that the most effective weapon in the combating of TB is the hospital bed.

Surgical procedures require beds, and so forth, medical care requires beds, and we need hospital beds for TB. This is the picture. We have this many (46.6 percent) as green reflects. We need that many (51.3 percent). This (2.1 percent) is the impact that the Hill-Burton program is having on TB.

This diagram represents the mental beds. The same problem is here as in TB. People are building more general hospital beds than they are building mental and TB beds. We feel they should build more mental beds than they are building; the same as we feel they should be building more TB beds than they are building. We feel, in general, that the general hospital, as our culture pattern is evolving, should become more truly general, and the general hospitals of the country I am sure in time will take on the treatment of selected cases of TB, of mental diseases, and of chronic disease. We will move away from the big 2,500 and larger capacity TB and mental hospitals.

Many factors enter into that. It is hard to staff those hospitals professionally. It is hard to staff them with the ancillary personnel, such as orderlies, technicians, and nurses. We feel that the problem of TB, as well as mental diseases probably can be more easily coped with if our general hospitals can admit selected cases in their own communities for the treatment of TB, and mental cases.

This is a picture from the mental point of view. This (55.1 percent) is what we have. This (44 percent) is what we need. This (0.9 percent) is what the Hill-Burton program is doing. In chronic diseases we find the big problem. Public health in the past has been the control of communicable diseases; public health of the future is the aging process and what to do about it. It starts with birth. We must find what to do about chronic diseases. This (89.2 percent) is the need of the country, according to the State plan compilation, by the States, of what they need in chronic diseases. This (10.3 percent) is what they have, and of course, this (0.5 percent) sliver is what the Hill-Burton program is doing.

Now that chart I think illustrates the very great need that we are facing. As I said, it is about 900,000 additional beds we need in this country for normal peacetime operations. We have a million beds at the present time. That is brought about because we didn't build many beds for a period of 20 years, and the fact that the normal attrition rate on hospitals in this country amounts to $75,000,000 a year roughly, due to hospitals burning down and becoming obsolete, and other reasons.

I would like to emphasize that these figures that I have quoted are our normal requirements. I haven't said anything yet about our present international situation.

EFFECT OF INTERNATIONAL SITUATION ON NEED FOR HOSPITAL FACILITIES

From this international or defense consideration, the need for continuing the program to provide needed hospital services in my opinion is indeed still quite great. It would seem needless to point out the enhanced values of our hospitals and health facilities in time of emergency as compared to time of normal economy. The value of hospitals and health resources supporting our stepped-up agricultural and production facilities cannot be overemphasized. The health of the industrial worker, farmer, or the members of their families actively supporting our defense economy is a paramount and fundamental thing at the present time.

We should in my opinion do everything we can to husband our manpower-resources, and particularly to protect the health of our population. I think one of the greatest assets our country has is the health of the worker, and if that worker's health cannot be kept up through good medical care, utilization of adequate medical facilities, then I think that our whole plan of increased production, both on the armament front as well as on the home front, as far as food and agriculture is concerned, is in great jeopardy. One of the essential ways to continue helping this situation in my opinion is the continuation of the Hill-Burton program to provide these necessary hospitals and public health centers. It should be borne in mind under this program that the States and Federal Government have done and are currently doing the only comprehensive program ever in existence in this country on a national basis for hospital construction.

I feel this work should continue, and that the funds can be made available for implementing these State plans, as these State people have said they should be.

EFFECT OF 1951 CUT-BACKS IN PROGRAM

In further emphasizing our unmet needs which confront us I would like to reveal the results of a recent survey. Upon the action of the Budget Bureau in reducing this program by $75 million in the form of a reserve against the appropriation, we were requested to ascertain the effect of that cut-back. An analysis of the reports submitted to us from all the States discloses that there are 453 communities in this country who had to be deferred, postponed indefinitely or to future years because of this reduction of $75 million. Of those 453 communities, 88 communities, at a conservative estimate through a survey the States made, had gone so far as to acquire their land, to float bond issues, to levy taxes, and to pay interest on their bonds, to raise funds to build hospitals through public subscription, loans or cash donations, had hired architects, had had the architects prepare the construction drawings and architectural renderings. The sponsors had submitted these and were all ready to go, but because of this cut-back these 88 communities cannot now get under way. They will not be able to get under way until funds are made available by the Congress for them to do so or the established reserve is released.

That is quite a serious problem in my opinion, as far as these 453 communities are concerned, and certainly a serious matter as far as the 88 communities are concerned. Many of those communities have gone ahead and let their bids for contracts and got favorable bids, and will not be able to get under way until 6 months from now. In doing so the cost of building will increase, materials will be tighter, and they stand to lose in several instances over a hundred thousand dollars through this action of the reduction in the Federal funds in 1951.

DISTRIBUTION OF PROJECTS GEOGRAPHICALLY

There are other factors in connection with this budget that I would like to mention because I think they merit attention.

Four-fifths of all the projects for general hospitals, whether they were new, additions or alterations or replacements, have been approved in communities of less than 25,000. In what may lie ahead for this Nation, it may be regarded as providential: first, that we had the Hill-Burton program in operation for a period of 4 years; we have built hospitals. Second, it may be regarded as providential that 70 percent of these new general hospitals constructed under this program, where no hospital existed before, are located in rural areas in communities of less than 5,000 population rather than our large metropolitan centers.

Now I say that is providential because I think, gentlemen, we have to be realistic, and we have to realize that some areas of our country are definite targets for onslaughts, whether they be atomic or bacterial in character, they are targets. I will try to demonstrate in a few minutes, that our facilities for handling what we need at the time of such catastrophe are woefully inadequate. We are going to have to fall back on these Hill-Burton hospitals and others like them which are not located in these large centers of denser population.

I would like to direct your attention to how diversified and dispersed this program has been and I might say I am proud to be able to show you something that is tangible.

I have been appearing here for a number of years, as most of you know, and some of the things I have had to discuss weren't too tangible and I will admit it, but on the other hand, I think today we have something that is tangible, and we are proud of it. It isn't entirely reflecting all to the Public Health Service and Federal Government's credit because I think the credit for this program lies with the States because the States are the ones who have done their own planning as to where we put these funds and how they are going to use them. This program is a fine example of how the State, the Federal Government and the local community can work together and build hospitals, and as you know, under the Hill-Burton law the Federal Government is forbidden to operate these hospitals.

Now this map I have to show you is a map containing dots that represent hospitals which have been built or approved under this program. All of these hospitals will be under construction by July 1 of this year. At the present time 867 are under construction.

Mr. SCHWABE. Some are completed, are they not?

Dr. CRONIN. Yes; there are 382 completed and in operation.

Now the code here, the round dots are general hospitals under a hundred beds, and the square dots are general hospitals over a hundred beds. I might tell you again that bout 75 percent are for general hospitals. More than 70 percent of the new general hospitals are located in places with a population below 5,000. Only 12 percent are located in towns over 10,000. The new general hospitals of less than 50 beds make up two-thirds of the new general hospitals being built.

Now the other hospitals, the triangles, are our TB hospitals. The L's are the mental hospitals and the T's are the chronic disease, and referring to the colored map I showed you, the TB, mental, and chronic are quite low in total numbers of projects—5 percent are mental; 3 percent tuberculosis; less than 2 percent are chronic, and 15 percent are public health centers.

Those are the hospitals, gentlemen, that have been built in communities where there were no hospitals before and there is approximately 500 of them on that map.

The interesting thing, about it, is where are these in relationship to our denser areas of population? This overlay contains stars of cities over 100,000 population. As you can see, these Hill-Burton hospitals are not in the city; these new hospitals, these general hospitals I refer to. As I said, we have approximately 500 of these new hospitals in areas that never had a hospital before. There are approximately 600 other projects out of our 1,500 which are located in cities where hospitals did exist. I would not differentiate between cities on a merit basis. I wouldn't attempt to do that as one city needs in relationship to another city, but we have 500 projects here in places that never had hospitals before. We have 600 projects not on this map which are additions or alterations.

An interesting thing about this map is that it is in the Southeast and the central Midwest, including Texas, up through Arkansas and Oklahoma, Kansas to the central Canadian border and so on, where most of these hospitals are going, and of course predominantly in our big industrial areas here. With many of our industries moving from New England down south in many instances because of economic factors, there is a need for supporting an economy down there.

That southern area was notoriously poor in its economy as far as hospitals and hospital care is concerned. Up through here in the Northeast area you don't see many new hospitals because these are our large dense areas of population, industrial areas now, and our 600 projects, just as many as we show here, are additions and alterations which have gone into these areas.

Now dollarwise most of the money of course is going into these general hospital projects. Here are Fort Worth and Dallas. There are no new Hill-Burton hospitals there in Fort Worth and Dallas because they won't be there if anything happens to Fort Worth in the way of an atom bomb or something like that; you will lose half of your hospitals in 10 seconds. The hospitals needed are these hospitals outside of Fort Worth and Dallas, the same as hospitals outside of Cincinnati, outside of Cleveland, outside of Detroit, outside of Chicago, and outside of Minneapolis and St. Paul, and outside our other major cities.

Mr. HEDRICK. It looks as if the State of North Carolina is taking advantage of this.

Dr. CRONIN. The State of South Carolina and others have done quite a bit too, Doctor, as I will show you when I show you the next map of the health center picture. Let's show that picture.

Mr. SCHWABE. May I ask a question before you discard this map, with reference to Oklahoma? You showed Texas had four of these red dots there, Fort Worth and Dallas, and I suppose Houston and San Antonio probably are the other two?

Dr. CRONIN. Yes, sir.

Mr. SCHWABE. Where do you get that in Oklahoma, right north of it?

Dr. CRONIN. That is Oklahoma City. These are all cities over 100,000.

Mr. SCHWABE. Is that intended for Oklahoma City, those two there, and Tulsa?

Dr. CRONIN. One is Tulsa and one is Oklahoma City. The map was not pushed up high enough.

Mr. SCHWABE. What is that in Kansas?

HEALTH CENTERS

Dr. CRONIN. Wichita, and Kansas City, Kans., and Kansas City, Mo.

Let us see the health centers before I go on from there. This map of health centers, Dr. Hedrick, is a very interesting thing. Being a physician I know your appreciation for health centers. Here is the health center picture. South Carolina has gone in heavy for health centers, as compared to hospitals. North Carolina has gone in heavy for hospitals, as compared to health centers, but the thing we have to consider here is what did they have. In North Carolina they had quite a few health centers, because it was their population's cultural pattern of health down there.

Here is an interesting thing around Atlanta. With a grouping of health centers outside that immediate area, which is Atlanta, as you can see. Mississippi has done quite a bit in regard to health centers, as has Louisiana, Texas, Oklahoma. There is an interesting thing in Ohio. As you know, modern medicine today is really a combination of curative medicine and preventive medicine, into a commodity

that we perhaps have called the modern medical commodity, which is health maintenance. To effect health maintenance, we have to put together curative medicine and preventive medicine, which is the treatment of diseases and public health. When you put these together we have to have facilities to do it. In many of our larger cities up through this heavy, dense population area this is carried on by clinic in the hospital which is a preventive clinic in character, the hospital being the curative part of it. Because of dense population usage they use the hospitals' X-rays and laboratories interchangeably for the hospital and the health center work. Ohio has planned and so has Kentucky, these square characters. They represent the combination hospital and health center. It was my privilege to go out to Ohio several times during the year, and to take part in the dedication ceremonies. These are usually about 50-bed hospitals containing the county health department. The county health department and the hospital use the X-ray and other diagnostic facilities interchangeably. They use the laboratory interchangeably. It is one economic way of providing those types of facilities for bed- or out-patient care throughout the country on an economic basis rather than at an exorbitant cost of duplicate facilities.

BED COSTS OF CONSTRUCTION

Mr. HEDRICK. How much does the average hospital and health center combined usually cost?

Dr. CRONIN. It is difficult to say because it depends on the size and the section of the country. I don't like to talk about hospital bed costs, as the cost of a hospital. A hospital that is a small hospital, with only a diagnostic X-ray in it, will have a lower per bed cost than the same hospital with an additional therapeutic X-ray. That will raise the bed cost, the addition of the therapeutic X-ray. The average cost across the country is about $13,500 a bed. I think in the last 6 months we can add a 15-percent increase on that.

The square footage cost, which is a much more safe and scientific way of estimating cost of a hospital, is around $17 to $21. To get your cubic-foot cost you divide usually by 10 or 12 depending on the height of the ceiling and we arrive at an average cost of about $1.40 to $1.75. Average bed costs are tricky.

Mr. HEDRICK. The veterans' hospitals cost more than that, don't they?

Dr. CRONIN. The veterans hospitals, I am not an authority on them because we don't build them, but I understand the cost is around $30,000 to $31,000 a bed, but there is a good reason for that. The reason for that is, in the first place they are not small hospitals. In the second place, the veterans hospitals include many features which our veterans in my opinion are entitled to while they are there. These are recreational facilities, picture shows, auditoriums and that type of thing, which you will not find in the small community 50-bed hospital because the people don't stay in those 50-bed hospitals for a long period of time. A lot of the boys in our veterans hospitals are there for a considerable period of time. They are so incapacitated that they cannot get out and the Veterans' Administration puts in such items as television, and so forth, far in excess of what you will find in our Hill-Burton hospital.

Mr. HEDRICK. They really remind you of a big club rather than a hospital when you go into it.

Dr. CRONIN. I haven't found a hospital yet that is a club.

Mr. HEDRICK. With all the recreation things that they have.

Dr. CRONIN. I think they are there for a therapeutic purpose. I think they serve well.

Mr. HEDRICK. No question about that. They dedicated one in my town in the last month that cost about $25,000 or $30,000 a bed.

Dr. CRONIN. I would not comment on the Veterans' Administration program because I have nothing to do with it.

Mr. HEDRICK. They really build nice ones. They go to all sorts of expense and preparation in an effort to make them nice.

Dr. CRONIN. I think they are doing what they think is the right thing to do and I wouldn't criticize them.

Mr. HEDRICK. I wouldn't either. I think the boys deserve every bit of it.

THE PROGRAM IN RELATION TO THE INTERNATIONAL SITUATION

Dr. CRONIN. I think they do.

There is one other matter upon which I would like to comment and that is the relationship of this program to the events in the present international situation. I would like to show you a map and I might tell you where it came from; Mr. James J. Wadsworth, of the Civil Defense Administration, wrote an article in American magazine; again I am not an authority on the civil defense of this country, but I did read this article. I did see his map and I did copy his map and this is his map related to our 500 hospitals, and again, this is the map that is out of American magazine. I am not plugging American magazine. I think we should put that in the record. That map is reflected here and these red bomb burst characters, if you will, are in the potential critical areas. I have added to that two areas, which have currently come up and we have been definitely working with those projects. One is the new hydrogen bomb plant at Savannah River area, between Aiken, S. C., and Augusta, Ga., and the other is the similar plant at Paducah, Ky.

Here again I would like to point out the relationship and what I consider to be the Providential factors of our hospitals under the Hill-Burton program in relationship to these target areas. We don't have them there, and we have our hospitals out where they can be utilized. I would like to take just one area and describe it for you. I think no one will dispute the fact that if we were to take at random a target area we would select Pittsburgh, because of our steel industry at Pittsburgh. One could say the same thing for Detroit. You could say the same thing for Washington in regard to the industry of government. However, I would like to show you what the picture is in Pittsburgh and tell you in advance that the same bleak picture exists in our other target areas, as I have shown them to you.

This is the Pittsburgh area. This black circle is a 25-mile area from downtown Pittsburgh. This is 50 miles and this is 75 miles out. Now from the material that has been already published by the National Security Resources Board, and the Civilian Defense Administration, and incidentally, the personnel on our staff helped develop the Health Services and Special Weapons Defense Report, as put out

by Civilian Defense and the reports for the National Security Resources Board because we had the technical competence and were properly utilized in that way.

On the basis of these reports, as put out by the resource organizations of our Government, a surprise daylight attack utilizing the conventional type atomic bomb, that is the bomb we know about and which was utilized at Hiroshima and Nagasaki, on an urban area such as Pittsburgh, would produce—the population there being about a million, a million two hundred thousand—about 120,000 casualties. Of these, one-third would be killed outright, in less than 10 seconds. Of the living 80,000 casualties, about one-third, would require attention by a first-aid station only, or some type of casualty clearing station. This would leave in the neighborhood of 50,000 people who would require hospital care. Bear in mind that the Cocoanut Grove fire in Boston was one of our Nation's greatest catastrophes. In the neighborhood of 600 people were injured up there and it taxed all the resources of the city of Boston in one night to handle them. If you relate 600 people that got hurt to 50,000 people, you can see the magnitude of our problem.

Now the only way you can handle casualties of that kind is by temporarily overloading our remaining hospitals in the area. The second thing we can do is establish temporary emergency hospitals such as schools or hotels and as you gentlemen know, that is part of the plan. The third thing we can do is evacuate patients in those hospitals into the outlying areas in the best way we can. We feel this can be accomplished only by prior planning. This is going on in the hospitals of the country today under Civil Defense and Public Health Service is helping in that area. That kind of planning and coordination is basically the kind of coordination that the Hill-Burton program has incorporated in its basic law. We do believe in it and are sponsoring it and under the State plans. The States are required to coordinate the hospital picture where you utilize the base hospital, which is usually the university medical school; the regional hospitals out from that and the community hospitals with the health centers as satellites. There is an interchange of medical manpower, setting up of teaching courses, cooperative buying, uniform administrative procedures and records, and all that enters into the picture of coordination and integration of hospital care.

On this map of the Pittsburgh area, we have added up here all the hospitals in terms of beds in a 75-mile distance from Pittsburgh. There are 15,653 beds. The States of Pennsylvania, West Virginia, and Ohio, of course, have plans to cover their tangents of the circle. It is estimated from those State plans that they need another 8,445 beds on the Pennsylvania side alone, without getting over here. We, at the present time, have added under the Hill-Burton program 874 beds, toward cutting down that 8,445 need. This is normal peacetime need. None of those 874 beds are in the city of Pittsburgh, because the priority system would block it under the Hill-Burton law. You have to build in the outlying areas, ahead of the areas of denser population because that is where our hospitals are now and we build in relationship to need under the Hill-Burton Act.

All of these 874 beds are being built out in this region. The need I think is quite great. We have, approved and are building as far as these 874 beds are concerned, 335 beds within 25 miles of Pittsburgh,

218 beds within 50, 321 beds within 75. In the area within 25 miles of Pittsburgh, if a bomb drops on it, you have got 8,205 beds in existence. You lose half of them with the atom bomb, and you wind up with roughly 4,000 beds. The bed occupancy in Pittsburgh is around 80 percent, so in those 4,000 beds in Pittsburgh you have 3,200 patients and you have left 800 free beds. Sure, you are going to fall back on the schools, on the hotels, but 800 free beds isn't going to help very much. You are going to have to evacuate these people in the beds and the people that are hurt out as far as you can and to do that you have to have something to evacuate them to. We feel the Hill-Burton program is building the hospitals to evacuate them to.

There is one other problem I think is very important and that is after the bomb drops, 2 weeks, 3 weeks, 4 weeks, 6 months, this place is going to be all torn up. You are going to have to get people taken care of. They are going to be hurt putting these buildings together and you are going to have to have those hospital beds to put them in. We are in very, very bad shape as far as hospital beds are concerned, and we need more hospital beds. In peacetime economy and more so in wartime such as I have described the need is terrific, and we feel that one of the ways to hit that is to continue the Hill-Burton program and build as many beds as we can.

As I said before we are permitted to ask for $75 million. The statutory authority is for $150 million.

AVAILABILITY OF MATERIALS AND EQUIPMENT

I would like to dwell a moment on another subject, as far as the construction outlook is concerned, and that is the availability of materials and equipment.

We are experiencing some difficulty in getting materials and equipping the projects. To date these problems of temporary shortages and nonavailability of equipment have not proven insurmountable. As you know, Federal Security Agency has been designated as a claimant agency in the field of health supplies and equipment, domestic distribution thereof, and also in the field of hospital construction. My staff, with the other technical experts, have been aiding this new division in the Public Health Service to the best of our ability, with our statistical information. It is my understanding there is about $800,000,000 dollars worth of hospital construction going on in this country. The Public Health Service under the Hill-Burton Act, is concerned with about 42 percent of that. In so doing we are in a favorable position to come up with trends, because we are the major place where there is a pyramiding of all that detail information. In the months that lie ahead of us I think the situation may even become more pronounced and even more acute. However, I personally feel and have every reason to believe that those in charge of the programing, distribution, allocation of materials, and so forth will not neglect nor overlook the importance of our hospitals and hospital construction in our Nation's defense effort. I think that has been public knowledge.

The State agencies, again, also are very keenly aware of the limited funds and resources that will be made available and I am confident the funds made available for fiscal year 1952 will be wisely spent in building up our complement of needed hospital beds. I think alloca-

tion of scarce materials will be made to some extent on priority basis and I think that that factor again will also tend to have a good influence on where we build hospitals.

AVAILABILITY OF HOSPITAL PERSONNEL

I would like to dwell for a moment on the problems of manpower and the shortages of trained personnel, physicians, nurses, and technicians. With 382 projects now in operation under this program, we have yet to hear of any instance where the personnel problem has not been solved. Each case has been handled by the community, where the project was located as an individual problem. The new facility has attracted the doctor to rural areas and retains him if he was there. I can cite instances, as specific, and could include in the record the experience of Live Oak, Fla., where they had four doctors before they built their hospital. The hospital closest to them was 40 miles away. They now have seven doctors in the area and they are operating at the average level of hospital cost of operation, which is around $14.50 per patient-day.

(The following supplemental statement was supplied for the record:)

SMALL HOSPITAL ON THE SUWANNEE

On May 8, 1948, the second check drawn on the United States Treasury under Public Law 725 was presented to the sponsors of Suwannee County Hospital, Live Oak, Fla., by Surg. Gen. Leonard A. Scheele. The occasion was the dedication of the first hospital in Florida and the second in the country to actually receive funds under the Hospital Survey and Construction Act passed by Congress in 1946. This check was one of the first of many which have since been disbursed by the Federal Government to assist in the construction of hospital facilities in all sections of the United States.

The mammoth barbecue enjoyed by the thousands of visitors who attended the dedication ceremonies on that May afternoon has long been forgotten and the speeches of the many dignified guests are now only a matter of record. But what about the hospital—has it served the purpose for which it was constructed? Has it justified the expenditure of the funds contributed by the Federal Government? Has it helped the residents of Suwannee County to obtain more and better medical care?

Before evaluating the services made available to the people of Suwannee County it might be well to know a little about the community which the hospital was built to serve. Suwannee County is a rural area in northern Florida which derives its name from the famous river which flows nearby. It comprises an area of 687 square miles and its population of approximately 17,000 people produce some of the finest quality of flue-cured tobacco in the world. In 1946 four doctors were engaged in caring for the medical needs of the county. The closest hospital facilities were nearly 40 miles away. Approximately 95 percent of the babies born were delivered at home. It was quite obvious that the area needed hospital facilities and needed them badly.

It is not the intention of this article to imply that the State agency administering the Hospital Survey and Construction Act in Florida intervened at this point and made possible the building of a hospital in this area. Such was not the case. Local leaders in the community assumed the initiative and after careful study and deliberation proceeded to develop a building program.

When plans were completed and construction bids received it was obvious that the funds available were inadequate to complete the hospital as planned. Reluctantly the sponsors consented to reduce the size of the hospital and to omit many of its desirable features. However, shortly after the construction contract had been awarded, Federal funds became available making it possible to build the hospital as originally planned.

Although the Hospital Survey and Construction Act was not directly responsible for building a hospital in Suwannee County, it was an important factor in bringing about the fine, well-equipped hospital which opened in the fall of 1948. This 37-bed hospital made available to the people of Suwannee County for the first time adequate medical, surgical, obstetrical, and diagnostic facilities.

The hospital has now been in operation for 2 years and it is gratifying to observe the impact it has had upon the community. The primary benefits, of course, accrued to the 3,404 patients who were admitted and cared for and to the 415 infants who were born in the hospital during this period of time. Equally important, however, is the medical care made available to the entire population by the increase of doctors in the area. Prior to the opening of the hospital four physicians maintained offices in the county. At the present time seven doctors are practicing in the same area. In addition a young doctor recently graduated from medical school has made arrangements to establish himself in the community on the completion of his internship and residency training. All of the newcomers admit that the availability of modern hospital facilities furnished the primary motivation for their moving into the county.

The opening of the hospital has brought prepaid hospital insurance plans into prominence for the first time. When the closest hospital facilities were 40 miles away there was little incentive for the population to protect themselves with prepaid insurance plans. This is attested by the fact that only 5½ percent of the admissions during the first 6 months of operation were covered by Blue Cross. A year later 22 percent of the admissions were able to present Blue Cross cards. Although this percentage is low compared to some sections of the State it is obvious that much progress is being made and that the hospital is an important factor in this progress.

Prior to the opening of the hospital the sponsors were somewhat concerned over the generally accepted fact that small hospitals are excessively expensive to operate and difficult to staff. Operating data to date compiled by the Suwannee County Hospital indicates that this is not necessarily so. Even with the added expense usually associated with the opening of a new hospital the deficit for the first year of operation was not excessive. A comparison of Suwannee County Hospital statistics and those reported by the American Hospital Association for all general-short-term hospitals in 1949 discloses that Suwannee County had an average per patient day cost of $14.40 as contrasted with a national average of $14.33. The Suwannee County ratio of 1.70 employees was almost identical with the national average of 1.69. The average daily census of 61 percent was somewhat lower than the national average but despite this fact, there were occasions when it was necessary to set up beds in the corridors to accommodate the patient load.

During the second year of operation which ended September 30, 1950, the hospital not only broke even but actually showed a small surplus. (It should be noted that an agreement has been made whereby the county pays the full costs of indigent patients deemed to be their responsibility.) The number of admissions increased 19 percent over the first year while the cost per patient day decreased to $13.19. Those members of the community who had originally assumed a "cautious" attitude about the hospital now accept it readily.

Surprisingly enough adequate staffing of the hospital has not presented a great problem. Long before the hospital commenced operation the administration set out deliberately to obtain well-trained key personnel around which a desirable staff could be formed. When the hospital was opened these key personnel were available and operations commenced with a minimum of confusion. Arrangements were also completed to obtain the services of a radiologist and a pathologist on a part-time basis. These men spend one-half day each week in the hospital and their services are available at other times when required. This arrangement has worked out very well to the satisfaction of everyone concerned

The people of Suwannee County are proud of their hospital and proud of its accomplishments. They feel secure in their knowledge that if they should require hospitalization that modern facilities are available to them. An increasing percentage of the population are experiencing for the first time the feeling of security afforded by membership in prepayment hospital insurance plans. No longer are 95 percent of the babies being born at home—a large percentage of the newborns are now introduced into this world amid the surroundings of a modern delivery room. The almost doubling of the number of physicians in the community insures more and better medical care for the whole population regardless of whether or not they require hospitalization.

Has the hospital served the purpose for which it was built? Has it helped the community to obtain better medical care? The answer of the residents of Suwannee County to these question is an emphatic yes.

JOSEPH F. MCALOON,
Consultant, Hospital Division, Florida State Improvement Commission.
J. C. FLETCHER,
Superintendent, Suwannee County Hospital, Live Oak, Fla.

I believe that the new hospital assists greatly in raising the standards of medical care in a community. I believe also the new facility in the community attracts nurses and technicians. Many nurses are brought back to nursing. Some nurses married our boys that came back from the last war and when they returned to the young men's homes there were no facilities for them to do nursing. They didn't want to do private duty, and these hospitals have accorded a place of employment for nurses on even a part-time basis in many instances.

I think there is one other factor that I should stress, and that is that the establishment of a central facility, such as a hospital, whereby the doctor who is going to be in shorter supply than he is now, due to the military draining off of the medical manpower, can have concentrated for him the people that need his care. He can better take care of them in the hospital than if he did not have a hospital and had to go around from place to place.

FUNDS FOR LIQUIDATION OF CONTRACT AUTHORITY

You will note that $120,000,000 is being requested to liquidate the contractual obligation incurred under this program for the fiscal year preceding 1952; $105,000,000 was appropriated for this purpose in the preceding years, and an additional $10,000,000 was made available in the final days of the Eighty-first Congress, thus totaling $205,000,000. We have paid out in excess of $126,000,000 to date. We paid out $13,000,000 in January of this year. On the basis of our operating experience, the projects of our anticipated payments, we estimate that $120,000,000 will be necessary to meet these payments in fiscal year 1952.

REFERENCE TO PROJECTED SUPPLEMENTAL

I have one item that I think is important, and I hope you will agree. As you know, Mr. Chairman, we stated last year in our write-up of our budget here as it is presented, on page 44, we said that we would come in for $25,000,000 in the way of a supplemental for 1951. In view of the experience that we have had in the progress of the program, and in view of the cut-back that has been made from $150,000,000 to $75,000,000, and slowing up the communities, some of them are reluctant to go ahead and plan for hospitals because of planning once and getting caught. They don't want to plan again and get caught; and in view of the fact we have been given $10,000,000 by the action of the Eighty-first Congress, we do not feel that we will need to come in for the $25,000,000 in that supplemental. So in our figures here, the figures should be readjusted to show that there will be no need for that $25,000,000 at the present time.

If something unusual should happen and we couldn't meet our obligations we might have to come in for a supplemental budget of something less than $25,000,000, but my personal opinion is that we will not have to come in for a supplemental budget. We can in essence return the $25,000,000 which we never asked for and didn't receive.

Mr. FOGARTY. Well, that $25,000,000 was cut from your estimate in 1951, anyway, was it not? Were you cut $25,000,000?

Mr. HARLOW. Twenty or twenty-five.
Mr. FOGARTY. Are you finished with your statement.
Dr. CRONIN. Yes, sir.

NEW VETERANS HOSPITALS NOT YET OPENED

Mr. HEDRICK. Are you familiar with the fact there are six brand new hospitals now that have been finished recently by the Veterans' Administration and have not been opened due to the fact they can't staff them?
Dr. CRONIN. That is right. They are large hospitals.
Mr. HEDRICK. 200 beds.
Dr. CRONIN. That is a big hospital. Two hundred beds is a pretty big hospital for us. We talk 50 beds; 75 percent of our hospitals run to 50 beds.

SUMMARY FINANCIAL STATEMENT

Mr. FOGARTY. I will have inserted in the record at this point tables on pages 43 and 44 of the justification.
(The information is as follows:)

The following table shows by fiscal years the progress and the financial status of the hospital construction program since its inception.

Fiscal year	Number of projects given final approval	Allocations to States	Federal share of approved projects	Appropriation for Federal payments	Federal payments
1948	44	[1] $75,000,000	$4,009,380	[2] $15,000,000	$392,183
1949	457	[1] 75,000,000	86,105,148	[2] 40,000,000	9,293,145
1950	460	[1] 150,000,000	117,869,156	[2] 40,000,000	57,828,930
1951 (estimated)	559	[3] 85,000,000	166,881,485	[4] 110,000,000	115,000,000
1952 (estimated)	250	[5] 75,000,000	80,000,000	[6] 195,000,000	135,500,000
Total	1,770	460,000,000	454,865,169	400,000,000	318,014,258

[1] Contract authority.
[2] Liquidating cash.
[3] $75,000,000 contract authority and $10,000,000 obligational cash.
[4] $100,000,000 liquidating cash and $10,000,000 obligational cash.
[5] Obligational cash.
[6] $120,000,000 liquidating cash and $75,000,000 obligational cash.

Summary of allocations, obligations, and appropriations

[All figures are cumulative]

Fiscal year	Allocations to States	Obligations incurred	Total appropriations
1948	$75,000,000	$4,009,380	$15,000,000
1949	150,000,000	90,114,528	55,000,000
1950	300,000,000	207,983,684	95,000,000
1951 (estimate)	385,000,000	374,865,169	205,000,000
1952 (estimate)	460,000,000	454,865,169	400,000,000

SOURCE OF ALLOCATIONS TO STATES

	Contract authority	Appropriations	Total
1948	$75,000,000	0	$75,000,000
1949	150,000,000	0	150,000,000
1950	300,000,000	0	300,000,000
1951	375,000,000	$10,000,000	385,000,000
1952 (estimate)	375,000,000	85,000,000	460,000,000

APPROPRIATIONS

	For liquidation	For obligation	Total
1948	$15,000,000	0	$15,000,000
1949	55,000,000	0	55,000,000
1950	95,000,000	0	95,000,000
1951	195,000,000	$10,000,000	205,000,000
1952 (estimate)	315,000,000	85,000,000	400,000,000

Mr. FOGARTY. Will you correct those to delete the $25,000,000 supplemental you had anticipated?

Dr. CRONIN. Yes, sir.

ALLOTMENTS TO STATES, 1951 AND 1952

Mr. FOGARTY. I also have a table showing the allocations to the States on the grant of $75,000,000 and then on the $85,000,000, as revised, and I will ask that be put in the record at this point, revised to show 1952 and also the figures on the $150,000,000 basis.

(The information is as follows:)

Grants for hospital construction, Public Health Service—Allotments to the States for the fiscal years 1951 and 1952

[Based on $75,000,000, $85,000,000, and $150,000,000]

State or Territory	Fiscal year 1951	Allotments [1]	Tentative 1952 allotments [2]	Allotments on basis of Public Law 380, 81st Cong.
Alabama	$2,556,168	$2,901,596	$2,737,156	$5,505,203
Arizona	423,944	481,233	439,214	883,385
Arkansas	1,877,932	2,131,707	1,711,951	3,443,223
California	2,559,964	2,905,905	2,504,219	5,036,701
Colorado	508,658	577,395	527,980	1,061,919
Connecticut	505,382	573,677	564,767	1,135,909
Delaware	[3] 200,000	[3] 200,000	[3] 200,000	[3] 200,000
District of Columbia	243,944	276,910	[3] 200,000	373,843
Florida	1,439,696	1,634,249	1,718,951	3,457,302
Georgia	2,609,914	2,962,605	2,786,528	5,604,505
Idaho	311,984	354,144	295,118	593,566
Illinois	2,348,997	2,666,429	2,447,549	4,922,720
Indiana	1,908,751	2,166,690	1,847,558	3,715,967
Iowa	1,517,413	1,722,468	1,222,620	2,459,039
Kansas	1,016,497	1,153,861	982,311	1,975,708
Kentucky	2,453,141	2,784,646	2,438,240	4,903,998
Louisiana	2,108,328	2,393,237	2,043,931	4,110,929
Maine	531,660	603,506	564,097	1,134,561
Maryland	783,334	894,866	926,832	1,864,124
Massachusetts	1,647,164	1,869,754	1,872,207	3,765,543
Michigan	2,553,413	2,898,469	2,417,911	4,863,109
Minnesota	1,697,784	1,927,214	1,520,419	3,057,997
Mississippi	2,222,596	2,522,946	2,183,410	4,391,461
Missouri	2,158,353	2,450,022	1,985,622	3,993,654
Montana	[3] 200,000	[3] 200,000	[3] 200,000	378,337
Nebraska	680,245	772,170	607,140	1,221,132
Nevada	[3] 200,000	[3] 200,000	[3] 200,000	[3] 200,000
New Hampshire	316,301	359,048	294,224	591,769
New Jersey	1,453,840	1,650,305	1,538,813	3,094,992
New Mexico	404,068	457,671	489,778	985,083
New York	2,954,875	3,354,183	3,246,817	6,530,277
North Carolina	3,189,589	3,620,615	3,373,115	6,784,298
North Dakota	235,235	267,023	240,011	482,731
Ohio	2,973,486	3,376,308	2,989,157	6,012,048
Oklahoma	1,831,928	2,079,485	1,551,100	3,119,705
Oregon	768,012	871,797	524,778	1,055,478
Pennsylvania	4,595,414	5,216,416	4,278,277	8,604,838
Rhode Island	259,875	294,993	324,533	652,728
South Carolina	1,836,617	2,084,809	1,889,335	3,799,992
South Dakota	291,364	330,737	286,182	575,593
Tennessee	2,475,101	2,809,574	2,682,869	5,396,016
Texas	4,721,369	5,359,392	4,550,161	9,151,674
Utah	375,110	425,801	377,182	758,621
Vermont	209,701	238,039	235,767	474,194
Virginia	2,020,264	2,293,273	2,221,463	4,467,997
Washington	912,428	1,035,729	926,162	1,862,776
West Virginia	1,385,949	1,573,240	1,383,918	2,783,456
Wisconsin	1,544,509	1,753,227	1,546,334	3,110,119
Wyoming	[3] 200,000	[3] 200,000	[3] 200,000	214,930
Alaska	[3] 200,000	[3] 200,000	[3] [4] 200,000	[3] 200,000
Hawaii	249,081	282,740	[4] 224,075	[4] 450,679
Puerto Rico	2,297,260	2,607,701	[4] 2,252,963	[4] 4,531,353
Virgin Islands	28,362	32,195	[4] 27,255	[4] 54,818
Total	75,000,000	85,000,000	75,000,000	150,000,000

[1] Estimates of the population of the United States (excluding Armed Forces overseas) as of July 1, 1948, Bureau of the Census. Allotment percentages based on 3-year average, 1945–47 per capita incomes.
[2] Population of Continental United States as of Apr. 1, 1950, Bureau of the Census. Allotment percentages based on 3-year average, 1947–49 per capita incomes.
[3] Minimum allotments of $200,000 as specified in title VI, Public Health Service Act, as amended.
[4] Population for the territories are preliminary and not final 1950 census figures.

LIQUIDATION CASH ESTIMATE

Mr. FOGARTY. How did you arrive at this figure of $120,000,000?

Dr. CRONIN. Well, $120,000,000 is what we will need to pay for the obligations that we have incurred.

Mr. FOGARTY. By July 1, 1952?

Dr. CRONIN. Yes, sir.

Mr. FOGARTY. How much has been appropriated up until July 1, 1951, total?

Dr. CRONIN. $195,000,000 plus the $10,000,000, which we got in the Eighty-first Congress, because that was cash.

Mr. FOGARTY. That is $205,000,000.

Dr. CRONIN. That is right, sir.

Mr. FOGARTY. How much of that $205,000,000 have you actually spent as of today?

Dr. CRONIN. $126,000,000.

Mr. FOGARTY. So you have about $100,000,000 that has been appropriated and has not been expended?

Dr. CRONIN. We paid out $13,000,000 in January, and we expect that rate to continue and if that rate continues, then you have got 6 times 13, is what; 78, and it may increase, so we will spend all the money we have got, with maybe a very little left over to carry into 1952.

Mr. FOGARTY. Well, if you expended $13,000,000 in January, you have 5 months to go; five times 13 to 65. If it does not go at that rate, you would have around $35,000,000?

Dr. CRONIN. Yes, but I think it will go at that rate, because we have these hospitals under construction. They are actually laying brick on brick in nearly nine hundred projects which we have to pay for.

Mr. FOGARTY. Do you know the completion date?

Dr. CRONIN. They complete them as fast as they can now because of the shortage of materials. They buy the materials and stock it, you see, and as soon as that hospital gets up or under way they put it on the site.

Mr. FOGARTY. They actually are not progressing faster today than they were 6 months ago, are they?

Dr. CRONIN. I think they are; $13,000,000 was a little bit faster pay-out in January than we had in the past.

Mr. FOGARTY. Unless there are more projects going, but any individual project would not be completed any quicker today?

Dr. CRONIN. No. Not if there isn't more projects going. We haven't hit that plateau yet where we are coming down the other side. We are still gaining projects.

EFFECT OF MATERIALS SHORTAGES

Mr. FOGARTY. What has been the effect, if any, of the material shortages in the building of any of these projects? Have any of them been halted because of lack of material of any kind?

Dr. CRONIN. No. None have actually been reported to us.

Mr. FOGARTY. Do you anticipate a halt of any of these projects that have been approved or will they be given priority for these materials?

Dr. CRONIN. I do not.

Mr. FOGARTY. Do you have any basis to believe that?

Dr. CRONIN. The only basis is this: The Federal Security Agency is the claimant agency before the National Production Authority for hospital construction; and whenever a complaint comes into my office, usually through the regional offices, that a certain hospital says they are having trouble in getting materials of some kind, we

refer it back to the contractor, or the sponsor of the group, to let us know specifically what is his problem, who is his normal distributor, and why isn't he getting it. Is it his credit rating that is affecting the thing, or is it actually the fact that he is in too much competition with defense orders from the military side of defense to get the material? Then, when we get that information back, and we can present the case via our Division of Claimant Activities to the NPA, we plead for assistance to that hospital. We have, as yet, had none of the projects gotten to the point where they could put down specifically that they couldn't get materials. Sometimes people cry "wolf" before the wolf gets there, and that is happening; and it is my opinion that every one of these hospitals will be taken care of particularly on the basis of the attitude of the NPA, as far as hospitals and the need for hospitals is concerned.

LIST OF CERTAIN PROJECTS POSTPONED DUE TO 1951 CUT-BACKS

Mr. FOGARTY. You said that 88 communities had gone so far in their planning—with the understanding that under the authorization and the original appropriation a year ago of $150,000,000 they had gone so far as to have hired their architects, acquired the land, had plans drawn, and were paying into a fund interest on their bond issues, and all that.

Dr. CRONIN. Yes.

Mr. FOGARTY. Have you any idea or estimate of the cost to those who paid the interest, the 88 communities? They were cut off of this program. They had to be deferred because of impounding of appropriations.

Dr. CRONIN. To complete those 88 communities and get them off the hook, so to speak, it would take under our modus operandi with the formula, population, and income per capita, the factors we have to use in the distribution of this money, it would take approximately $30 million, because those 88 projects are spread over 31 States.

Mr. FOGARTY. Do you have a list of those communities and States?

Dr. CRONIN. We can put them in the record.

(The information is as follows:)

List of 88 projects postponed to fiscal year 1952 (site acquired, drawings completed, and local funds raised) [1]

State	Location	Name	Estimated Federal funds
Alabama	Oneonta	Blount County Hospital	$240,000
	Huntsville	Madison County Health Center	80,000
	Aliceville	South Pickens County Hospital	174,000
	Reform	North Pickens County Hospital	174,000
	Demopolis	Brian-Whitfield Memorial Hospital	186,666
	Moulton	Lawrence County Hospital	320,000
Colorado	La Jara	South San Luis Valley Hospital	119,012
Connecticut	New Britain	New Britain General Hospital	300,000
	Norwalk	Norwalk Hospital	300,000
Florida	Winter Garden	West Orange Memorial Hospital	126,592
Indiana	Terre Haute	St. Anthony's Hospital	387,130
	Fort Wayne	Lutheran Hospital	500,000
	do	Methodist Hospital	1,474,080
	Indianapolis	St. Vincent's Hospital	798,888
	New Albany	Floyd County Hospital	525,000
	South Bend	South Bend Memorial Hospital	1,200,000
	do	St. Joseph's Hospital	505,000

See footnotes at end of table, p. 655.]

List of 88 projects postponed to fiscal year 1952 (site acquired, drawings completed, and local funds raised) [1]—Continued

State	Location	Name	Estimated Federal funds
Iowa	Davenport	Mercy Hospital	$666,666
Kentucky	Lexington	Good Samaritan Hospital	580,000
	Danville	Ephriam McDowell Memorial Hospital	300,000
	Fort Thomas	Campbell County Hospital	1,000,000
	Louisville	Children's Hospital	300,000
Massachusetts	Lowell	Lowell General Hospital	400,829
	Newburyport	Anna Jacques Hospital	306,627
Michigan	Menominee	St. Joseph's Hospital	92,106
	Grand Rapids	Blodgett Hospital	414,900
	Island Park	Island Park General Hospital	341,840
	Detroit	Receiving Hospital	200,000
Minnesota	Madison	Madison Hospital	222,957
	Duluth	St. Luke's Psychiatric Hospital	15,750
Mississippi	Jackson	University Teaching Hospital	3,000,000
Montana	Philipsburg	Granite County Hospital	93,302
	Baker	Fallon County Hospital	114,507
	Libby	St. John's Lutheran Hospital	108,187
	Plentywood	Sheridan Memorial Hospital	108,187
	Livingston	Livingston Community Hospital	284,147
Nebraska	Ogallala	Ogallala Memorial Hospital	210,000
	Loup City	Sacred Heart	180,000
	Schuyler	Schuyler Memorial Hospital	158,000
New Hampshire	Concord	Concord Hospital	900,000
New Jersey	Paterson	Barnert Memorial Hospital	[2] 188,731
New York	Poughkeepsie	St. Francis Hospital	548,200
	Canandaigua	F. F. Thompson Hospital	164,167
	Rochester	Highland Hospital	58,551
	do	Genessa Hospital	150,574
North Carolina	Statesville	Billingsley Memorial Negro Hospital	101,200
	Charlotte	Memorial Hospital	212,520
	Henderson	Maria Parham Hospital	188,232
	Waynesville	Haywood County Hospital	334,719
	Reidsville	Annie Pearn Memorial Hospital	126,500
	Thomasville	City Memorial Hospital	259,578
	Yadkinville	Lula L. Hoats Memorial Hospital	151,800
North Dakota	Cando	Towner County Memorial Hospital	287,828
Ohio	Canton	Aultman Hospital	896,898
Oklahoma	Tipton	Tipton Valley Hospital	20,575
	Clinton	Western TB Sanatorium	335,587
	do	do	109,125
	Norman	Central State TB Sanatorium	116,250
	Vinita	Eastern State (mental)	207,000
	Fort Supply	Western State (mental)	207,000
	do	do	207,000
	Norman	Central State (mental)	189,000
	do	do	207,000
Oregon	Lebanon	Lebanon Community Hospital	193,667
	Portland	Portland Sanitarium Hospital	205,900
Pennsylvania	Pittsburgh	Suburban General Hospital	184,800
	Reading	Reading General Hospital	756,425
	Braddock	Braddock General Hospital	503,200
	Canonsburg	Canonsburg Hospital	185,980
	Chester	J. Lewis Croger Hospital	120,000
Rhode Island	South Kingston	South County Hospital	114,720
South Dakota	Mitchell	St. Joseph Hospital	200,000
Tennessee	Cookeville	Cookeville General Hospital	157,000
	Pulaski	Giles County General Hospital	156,000
	Union City	Obion County General Hospital	208,000
	Jackson	Jackson-Madison County General Hospital	314,312
	Manchester	Coffee County General Hospital	465,400
	Erwin	Unicoi County General Hospital	128,960
	Chattanooga	Baroness Erlanger Hospital	363,792
Texas	Terrell	Terrell State Hospital	650,000
Vermont	Randolph	Gifford Memorial Hospital	165,000
Virginia	Bristol	Kings County Memorial Hospital (Nurses' Training School)	180,400
West Virginia	Wheeling	Ohio Valley General Hospital	2,491,600
Wisconsin	Antigo	Langlade County Memorial Hospital	248,107
	Oconomowoc	Lutheran Memorial Hospital	268,769
	La Crosse	Lutheran Hospital	310,859
	Milwaukee	St. Francis Hospital	1,947,699
Puerto Rico	(Island-wide)	5 rural health centers	52,500
	Yanco	Municipal Hospital	60,000
			33,321,598

[1] Does not include projects postponed beyond 1952 fiscal year or projects which have not fully raised funds or proceeded with architectural drawings to final stages.

[2] This project has since been included in the present program.

Source: Informaton submitted by the State agencies November 1950.

Mr. FOGARTY. Have they been bothering you?

Dr. CRONIN. Yes, sir, Mr. Chairman; they and many of the other 453, or the 88 subtracted from the 453. They can't understand basically why they can't go ahead, when they need their hospitals so vitally. The hospital is important to a community. I think there is no one that appreciates the need for the hospital in the community as do the people of the community. We in Washington, and myself, sitting on top of this program in my visits, I don't think can possibly appreciate the need for these hospital services as much as the person living in that community who has to drive 50 miles away to get his hospital services. This Live Oak, Fla., program that I mentioned, 96 percent of the babies were born in the homes; and now, since they got their hospital, quite a large percentage of them are born in the hospital. That is a very interesting story. It is supposed to be printed in the journal Hospitals in the next month. It happened to hit my desk last Friday.

STAFFING FOR COMPLETED PROJECTS

Mr. FOGARTY. Doesn't this also have some effect on the distribution of the available physicians in the country at the present time that can take care of more people when they have hospitals with the patients in them?

Dr. CPONIN. That is right. Dr. Franklin Murphy, of the University of Kansas, dean of the Medical School, has worked out a program whereby the small towns of his State come to the Medical School and acquire services of physicians. He is really the clearinghouse for physicians, in Kansas, to be located in the rural areas. The community comes in via the Hill-Burton program to get a hospital, and the physician then, when he goes to the community, has the equipment that he really needs to practice medicine properly. That is going on in several States.

Mr. FOGARTY. You have 382, now operating. That is public-health centers and hospitals?

Dr. CRONIN. That is right, 280 hospitals.

Mr. FOGARTY. Are any of those projects not fully staffed?

Dr. CRONIN. We have not heard that they are. We would hear if they had trouble, but we haven't heard. As far as we know, they are all operating and going along.

Mr. FOGARTY. And they are paying their own way?

Dr. CRONIN. They are paying their own way.

Mr. FOGARTY. Do they have any difficulty any of them?

Dr. CRONIN. Well, as you know, one of the problems in operating, and I am not an authority in operating hospitals as far as this program is concerned, but one of the problems in operating these voluntary hospitals is the payment of the debts incurred by the patients. In fact, that is partially solved by prepayment insurance plans, and in nearly all of these hospitals, and again I cite you the Live Oak story. Their prepayment-insurance plan, Blue Cross, is jumping in leaps and bounds in that community as far as membership is concerned. Since they got their hospital, it has gone up.

Mr. FOGARTY. The reason I asked that question is you know some have not been in sympathy with this program and have made the claims in the past that when they had the hospitals built you would not be able to staff them. You have not experienced that trouble; have you?

Dr. CRONIN. We have not.

Mr. FOGARTY. And also the claim has been made that the local communities, after they have raised the funds and the Federal Government has participated in the building of these hospitals, wouldn't be able to maintain them after they were built.

Dr. CRONIN. We haven't had any hospitals closed.

Mr. FOGARTY. Do you anticipate any?

Dr. CRONIN. I don't know.

Mr. FOGARTY. Do you anticipate any trouble in the staffing of these hospitals?

Dr. CRONIN. I think we are running into a situation on staffing which is part of the international situation, which was not part of the Hill-Burton picture in the beginning. There will undoubtedly be a little trouble in staffing, but I have enough faith in the ingenuity of the American public that if they have a hospital they will have a staff. In fact, I am sure they will. We may have to resort to auxiliary personnel the same as dental programs utilize dental hygienists.

Mr. FOGARTY. We will have to have volunteers as we did in the last war, to go into the hospitals.

Dr. CRONIN. Nurse's aides, high-school girls, and so forth, and I know that is a pattern and has carried over from the past war, and I think will carry over under this program at this time.

NUMBER OF BEDS NEEDED

Mr. FOGARTY. Where do you arrive at your figure of 839,000 beds still needed?

Dr. CRONIN. On the basis of the formula that I described, that 4½ beds per 1,000 population, and so forth, in the Hill-Burton Act. Each State had to submit a State plan, which must be revised annually.

Mr. FOGARTY. This is in effect the estimate of the States themselves, not an estimate made by you?

Dr. CRONIN. That is correct. We had nothing to do with making that estimate. All we did was examine it or compile it and all I did was list what we compiled.

Mr. FOGARTY. Do you have that estimate State by State of the hospitals and lack of hospital beds?

Dr. CRONIN. Yes.

Mr. FOGARTY. Will you put that in the record?

Dr. CRONIN. Yes, sir.

(The information is as follows:)

Total number of hospital beds needed, those existing, and those needed to be constructed by type of service reported in official State plans [1]

State	Total			General			Mental			Tuberculosis			Chronic disease		
	Total needed	Existing	To be constructed	Total needed	Existing	To be constructed	Total needed	Existing	To be constructed	Total needed	Existing	To be constructed	Total needed	Existing	To be constructed
Total, United States and Territories	1,880,023	1,009,568	870,635	697,493	468,842	228,826	744,323	415,530	328,793	140,391	85,351	55,040	297,821	39,845	257,976
Total, United States	1,835,462	994,837	840,800	684,781	461,887	223,069	730,323	412,321	318,002	128,135	81,201	46,934	292,223	39,428	252,795
Alabama	35,527	10,821	24,706	12,787	6,925	5,862	14,195	3,320	10,875	2,867	576	2,291	5,678	----------	5,678
Arizona	10,289	4,773	5,496	3,758	2,834	924	3,725	1,316	2,410	1,295	552	743	1,490	71	1,419
Arkansas	23,940	8,236	15,704	8,722	3,651	5,071	9,615	3,135	6,480	1,757	1,450	307	3,846	----------	3,846
California	131,996	74,541	57,455	48,946	31,807	17,139	52,655	35,999	16,656	9,333	5,052	4,281	21,062	1,683	19,379
Colorado	16,451	12,029	4,422	6,184	5,184	1,000	5,925	5,182	743	1,972	1,632	340	2,370	31	2,339
Connecticut	24,978	17,966	7,012	9,180	6,733	2,447	10,055	8,707	1,348	1,721	1,721	----------	4,022	805	3,217
Delaware	3,781	2,334	1,447	1,420	1,201	219	1,485	704	781	282	193	89	594	236	358
District of Columbia	10,983	6,420	4,563	3,780	2,491	1,289	4,200	2,872	1,328	1,323	880	443	1,680	177	1,503
Florida	29,078	16,221	12,857	10,793	7,679	3,114	11,730	5,791	5,939	1,863	1,843	20	4,692	908	3,784
Georgia	39,574	21,577	17,997	14,382	8,371	6,011	15,980	10,141	5,839	2,820	1,625	1,195	6,392	1,440	4,952
Idaho	7,200	2,743	4,457	2,930	1,559	1,371	2,930	921	2,009	168	70	98	1,172	193	979
Illinois	104,802	54,835	49,967	38,982	27,635	11,347	42,245	18,895	23,350	6,677	4,819	1,858	16,898	3,486	13,412
Indiana	46,933	18,959	27,974	17,288	8,034	9,254	19,175	9,426	9,749	2,800	1,260	1,540	7,670	239	7,431
Iowa	30,468	12,566	17,902	11,715	8,560	3,155	12,695	2,981	9,714	980	639	341	5,078	386	4,692
Kansas	23,358	13,277	10,081	8,962	6,598	2,364	9,562	6,026	3,536	1,010	565	445	3,824	88	3,736
Kentucky	35,798	16,678	19,120	12,564	7,368	5,196	13,728	7,407	6,321	4,015	1,614	2,401	5,491	289	5,202
Louisiana	33,668	16,933	16,735	13,281	9,453	3,828	12,830	5,785	7,045	2,425	1,469	956	5,132	226	4,906
Maine	11,168	5,440	5,728	4,082	1,902	2,180	4,535	2,978	1,557	737	408	329	1,814	152	1,662
Maryland	27,535	16,573	10,962	9,635	7,077	2,558	10,705	6,097	4,608	2,913	1,798	1,115	4,282	1,601	2,681
Massachusetts	59,398	39,585	19,813	22,983	13,006	9,977	23,172	21,102	2,070	3,975	3,688	287	9,268	1,789	7,479
Michigan	74,649	30,749	43,900	27,890	14,652	13,238	30,345	11,351	18,994	4,276	3,659	617	12,138	1,087	11,051
Minnesota	36,871	22,214	14,657	14,798	11,065	3,733	14,440	8,652	5,788	1,857	1,857	----------	5,776	640	5,136
Mississippi	26,184	9,901	16,283	9,670	5,491	4,179	10,560	3,799	6,761	1,730	611	1,119	4,224	----------	4,224
Missouri	49,019	29,804	19,215	18,458	14,287	4,171	19,515	12,499	7,016	3,240	1,817	1,423	7,806	1,201	6,605
Montana	7,716	5,444	2,272	3,766	3,259	507	2,545	1,960	585	387	225	162	1,018	----------	1,018
Nebraska	15,951	9,877	6,074	6,515	4,714	1,801	6,420	4,424	1,996	448	242	206	2,568	497	2,071
Nevada	2,341	1,135	1,206	997	801	196	860	310	550	140	24	116	334	----------	344
New Hampshire	6,486	4,285	2,201	2,564	1,792	772	2,655	2,314	341	205	139	66	1,062	40	1,022
New Jersey	58,225	35,714	22,511	21,496	15,530	5,966	23,135	14,426	8,709	4,340	3,211	1,129	9,254	2,547	6,707
New Mexico	8,392	3,537	4,855	3,458	2,206	1,252	2,855	1,000	1,855	937	288	649	1,142	43	1,099
New York	186,237	132,647	53,590	68,267	51,370	16,097	74,876	63,343	11,533	13,143	9,743	3,400	29,951	8,191	21,760
North Carolina	47,364	26,621	20,743	18,898	12,745	6,153	18,375	10,900	7,475	2,741	2,741	----------	7,350	235	7,115
North Dakota	7,820	5,316	2,504	3,758	2,770	998	2,705	2,160	545	275	275	----------	1,082	111	971
Ohio	95,851	46,118	49,733	35,075	23,291	11,784	38,338	18,827	19,511	7,103	3,475	3,628	15,335	525	14,810
Oklahoma	29,758	15,425	14,333	11,342	7,718	3,624	11,375	6,249	5,126	2,491	1,247	1,244	4,550	211	4,339
Oregon	20,619	9,122	11,497	7,834	4,395	3,439	8,670	4,232	4,438	647	495	152	3,468	----------	3,468
Pennsylvania	129,360	73,530	56,005	47,207	35,267	12,115	52,452	32,751	19,701	8,720	3,944	4,776	20,981	1,568	19,413

Oregon	20,619	9,122	11,497	7,834	4,395	3,439	8,670	4,232	4,438	647	495	152	3,468	----	3,468
Pennsylvania	129,360	73,530	56,005	47,207	35,267	12,115	52,452	32,751	19,701	8,720	3,944	4,776	20,981	1,568	19,413
Rhode Island	9,212	6,528	2,684	3,326	1,746	1,580	3,695	2,988	707	713	622	91	11478	1,172	306
South Carolina	24,047	10,572	13,475	8,932	5,798	3,134	9,800	3,483	6,317	1,395	1,089	306	3,920	202	3,718
South Dakota	8,403	4,781	3,622	3,696	2,701	995	3,215	1,888	1,327	207	192	15	1,285	----	1,285
Tennessee	41,364	21,340	20,024	14,494	8,969	5,525	16,179	8,043	8,136	4,123	2,069	2,054	6,568	2,259	4,309
Texas	92,442	42,819	49,623	33,671	25,289	8,382	35,765	11,071	24,694	8,700	3,944	4,756	14,306	2,515	11,791
Utah	8,169	3,516	4,653	3,335	2,270	1,065	3,335	1,076	2,259	165	100	65	1,334	70	1,264
Vermont	4,587	2,501	2,086	1,764	1,099	665	1,820	1,220	600	275	142	133	728	40	688
Virginia	37,618	16,103	21,515	13,858	8,614	5,244	14,875	5,888	8,987	2,935	1,601	1,334	5,950	----	5,950
Washington	31,229	16,866	14,363	11,367	7,150	4,217	12,630	6,185	6,445	2,180	2,180	----	5,052	1,351	3,701
West Virginia	23,932	9,251	14,681	8,784	5,191	3,593	9,575	2,680	6,895	1,743	1,348	395	3,830	32	3,798
Wisconsin	41,131	24,788	16,343	15,636	12,639	2,997	16,770	9,111	7,659	2,017	2,017	----	6,708	1,021	5,687
Wyoming	3,580	1,826	1,754	1,551	1,000	551	1,400	706	694	69	50	19	560	70	490
Alaska	1,932	288	1,644	524	128	396	474	----	474	745	160	585	189	----	189
Hawaii	6,742	3,343	3,399	2,220	1,125	1,095	2,467	934	1,533	1,069	1,069	----	986	215	771
Puerto Rico	35,524	11,100	24,424	9,832	5,702	4,130	10,925	2,275	8,650	10,397	2,921	7,476	4,370	202	4,168
Virgin Islands	386	----	368	136	----	136	134	----	134	45	----	45	53	----	53

[1] Plans approved as of Jan. 1, 1951.

BEDS EMBRACED BY PROJECTS APPROVED TO DATE

Mr. FOGARTY. As I remember the figures you had, as of July 1, 1951, 73,000 beds will have been built under this program?

Dr. CRONIN. I should correct that this way, that the 1,497 projects which are approved at present, will result in 73,000 beds.

Mr. FOGARTY. I see.

Dr. CRONIN. Some of those won't be finished, because this program runs on a 2-year basis. A bed approved last week, a hospital approved last week, can't get finished by July 1.

Mr. FOGARTY. Well, this $75,000,000 that we are requested to appropriate in the next fiscal year——

Dr. CRONIN. Would have nothing to do with that 73,000 beds.

Mr. FOGARTY. That would be in addition to 73,000?

Dr. CRONIN. That is right.

Mr. FOGARTY. How many beds do you figure that would be?

Dr. CRONIN. The $75,000,000?

Mr. FOGARTY. Yes.

Dr. CRONIN. That is a hard question to answer, because part of that $75,000,000 undoubtedly will be used in health centers.

Mr. FOGARTY. How many health centers have been approved up to date?

Dr. CRONIN. I think it is—325 to be exact.

Mr. FOGARTY. What is the authorization in the Hill-Burton Act as to health centers?

Dr. CRONIN. It is part of the designated category of projects that can be approved. The projects in general are hospitals, public health centers, and equipment of both hospitals and health centers, alterations, additions and replacements of hospitals.

Mr. FOGARTY. Do you have any breakdown as to the new construction of hospital facilities where new beds have been provided, and funds expended on repairs, and alterations in health centers?

Dr. CRONIN. We have all that material.

Mr. FOGARTY. Will you put that table in the record?

Dr. CRONIN. Yes.

(The information is as follows:)

Hospital construction projects classified by new construction and additions, alterations, and replacements, as of Dec. 31, 1950 [1]

	New projects	Addition, alteration, and replacement projects	Total cost	Federal share
Total all projects	888	601	$1,042,020,832	$384,892,721
General hospitals	617	488	876,529,206	326,947,745
Tuberculosis hospitals	22	25	45,189,919	14,780,901
Mental hospitals	17	63	58,263,927	24,932,716
Chronic disease hospitals	11	7	30,311,898	8,208,974
Public health centers	219	10	20.894,109	8,706,281
Laboratories	2	8	10,831,773	1,316,104

[1] Corrected to Feb. 26, 1951.

Mr. FOGARTY. The basic statute authorizes $150,000,000, in 1951?

Dr. CRONIN. $150,000,000 in contract authority annually from 1950 to June 30, 1955.

Mr. HARLOW. It authorizes an appropriation of $150,000,000, Mr. Chairman.

Mr. FOGARTY. And the Bureau of the Budget has allowed $75,000,000 for the next fiscal year.

Dr. CRONIN. Yes. In 1952 we have been permitted to ask for $75,000,000 in cash.

Mr. FOGARTY. Everything is on a cash basis.

Dr. CRONIN. According to our instruction from the Bureau of the Budget, we are asking for cash and not for contract authority.

PROJECTS DEFERRED DUE TO 1951 CUT-BACK

Mr. HEDRICK. I would like to ask about a hospital in my district called the Boone-Raleigh Hospital. I wondered it it had been approved: at Whitesville, W. Va.

Dr. CRONIN. That project is one of the 453 projects which had to be deferred as a result of the cut-back, and is now deferred until fiscal year 1952. It is the Raleigh-Boone Hospital Association, at Whitesburg, 100 beds, total estimated cost, $1,480,000, Federal share is $921,892; the State agency reports as of November 27, 1950, that is from Dr. Dyer, that this project is now anticipated for approval in 1952, contingent upon the Congress appropriating money for allocation to the State. The site is owned, but the project has been abandoned for the present because of the uncertainty of funds.

Mr. DENTON. Doctor, I am one of the people who has been bothering you about a hospital. They bought ground and made plans and let a contract and then cannot build.

Mr. FOGARTY. Is that one of these 88?

Mr. DENTON. One of these 88. Do you know any solution to that problem at all?

Dr. CRONIN. There are several solutions Mr. Denton, as I see them. One is that if the $75,000,000, that is presently placed in reserve would be released for utilization, that would solve that problem. No. 2 is if the Congress in its wisdom would appropriate money, it would solve the problem. They would have to restrict their appropriation, unless the law was changed, to stay within the $150,000,000, which would be $65,000,000. We have $85,000,000 already for this year; the contract authority under the Public Law 380 is $150,000,000 so there is $65,000,000 left that could be by virtue of an amendment, tacked onto some bill that would pass, and if it were not vetoed, or if the President did not invoke his statutory powers as Chief Executive to throw some of the money in reserve there is a possibility that money would come out that way. Otherwise I know of no way to do it, no, sir.

Mr. DENTON. As I understand, there is $75,000,000 that Congress appropriated but which, under section 1214, the Budget Director impounded. The Budget Director could release that money?

Dr. CRONIN. He could.

Mr. DENTON. Is there any possibility of his doing that do you think?

Mr. FOGARTY. A couple of bills were introduced to that effect, but they never got very far.

Dr. CRONIN. The only comment I can make, Mr. Denton, is that I have not been advised by the Director of the Bureau of the Budget that he intends to do so.

Mr. DENTON. I know in this situation I have in mind it is going to cost the local community probably $100,000 because of this delay. It seems to me it is penny-wise and pound foolish to lose that amount of money and I imagine all the other projects are in the same category.

Dr. CRONIN. That is right.

Mr. HEDRICK. Mr. Harlow, what do you have to say on that proposition?

Mr. HARLOW. On the rest of the reserve, I think it is quite unlikely. We made all the representations we could when this item was first up for reserve. Furthermore, you recall that the Budget Director has been directed by Congress to impound $550,000,000. This $75,000,000 is part of the $550,000,000, and in order for him to give any of that money to us he has to take it off somewhere else. He could shift the reserve to some other appropriation and then release this to the Public Health Service, but otherwise he is bound by the $550,000,000 requirement.

Mr. DENTON. Didn't they impound more than $550,000,000?

Mr. HARLOW. I don't know what the actual figure was.

Mr. STEPHENS. It was nearer $575,000,000 that he actually impounded, although the statute called for a minimum of $550,000,000 and didn't limit it even to the military. He could go into the defense if he wanted to. Mr. Harlow has hit a point, and I would rather be off the record.

(Discussion off the record.)

Mr. FOGARTY. We can't finish tonight so I think we had better adjourn until Monday.

MONDAY FEBRUARY 26, 1951.

Mr. HEDRICK. The committee will come to order, please. When we adjourned last Friday we had under consideration the hospital construction grants, which we did not quite finish. We will try to finich today. Dr. Cronin, do you have any further statement you want to make before the committee?

Dr. CRONIN. Before we start—off the record.

(Discussion off the record.)

BUDGET REQUESTS FOR 1952

Mr. SCHWABE. One question, Mr. Chairman. I am not sure that I understand just what the Bureau of the Budget recommended here and the purport of some of this language. Will you kindly tell us how much money has been recommended by the Bureau of the Budget in the appropriation for hospital construction for 1952 fiscal year?

Dr. CRONIN. Mr. Schwabe, the Bureau of the Budget recommended and in my justification we are asking for a total amount of money of $195,000,000 of which $120,000,000 is for the payment of obligations incurred under prior year contract authorizations, and $75,000,000 which will place the program on a cash basis in lieu of the contract authorization basis for 1952.

Mr. SCHWABE. With no contract authorization for 1952?

Dr. CRONIN. That is correct, it is all cash.

Mr. SCHWABE. In other words, it will make it current with cash appropriation?

Dr. CRONIN. That is right except for one item.

Mr. SCHWABE. What is that?

SPLIT PROJECT APPROVAL PROCEDURE

Dr. CRONIN. Many of these projects are carried through more than one fiscal year because of their size and dollar costs in relationship to the amount of the State's allotment under the Hill-Burton program, which is as you know determined by two principal factors, one of which is the population of the State and the other is per capita income. Some of the States receive small amounts of money as compared to other States, and yet if the size of a hospital to be built is the same in both States, it will cost essentially the same in both States. Some of the smaller States are building the larger hositals by using the split project type of procedure. In other words, they will allocate a certain amount of money out of the State allotment for 1 year and then allot another amount of money for the same project in the forthcoming year, and some of the split projects go over 3 years, particularly when there are large hospitals to be built.

The split project technique is a technique which has permitted the building of some of the larger hospitals in some of the smaller States.

Mr. SCHWABE. But that would not change the situation appropriationwise, federally?

Dr. CRONIN. No, it should not.

Mr. SCHWABE. It only changes it appropriationwise for the States.

Dr. CRONIN. That is right, except that——

Mr. SCHWABE. Your funds here appropriated would be held until expended for these particular projects, would they not?

Dr. CRONIN. That is correct, with this exception again, that in carrying forth the completion of a project which is working on several years' appropriation at any one time those moneys for each part of the project are obligated only out of moneys which the Federal Government has in the bank, so to speak. The parts of the project for the years to come are always provisional that the Congress appropriate money for that year.

Mr. SCHWABE. It has to be based on that assumption.

Dr. CRONIN. That is right.

Mr. SCHWABE. I have a situation in mind in a certain State which does not happen to be my own State of Oklahoma where the State institution seeking relief is the hospital for the insane, I think it was. They come in under your program, too, do they not?

Dr. CRONIN. All except the feeble-minded and the epileptics.

Mr. SCHWABE. That is right and in this particular instance they had in mind building a certain portion of the building or an additional wing that fiscal year and then later on another one, and so forth. Now, that is a good deal like what you are talking about, as an illustration?

Dr. CRONIN. That is an example.

Mr. SCHWABE. Well, now, we hear that there is a shortage of doctors which I think is true, is it not; is that recognized?

Dr. CRONIN. There are sources that will claim that; yes, sir.

Mr. SCHWABE. Well, is that not generally accepted as a true statement?

Dr. CRONIN. I would prefer to say that the distribution of the doctors we have is not in line with the needs of the country.

Mr. SCHWABE. They are very inadequately or very illy distributed in proportion to the needs, sometimes?

Dr. CRONIN. That is correct.

Mr. SCHWABE. All right. There has of course also been the statement we should get more young men to enter the medical colleges and for that reason a great many inducements have been offered during the last 3, 4, and 5 years to get additional young men imbued with the idea that it would be a good thing for them to study medicine, and encouragements have been offered to them more than ever before. Is that not true?

Dr. CRONIN. There have been plans to help the young men.

Mr. SCHWABE. Yes, in various ways, such as through scholarships and so on, have there not been?

Dr. CRONIN. That is right.

Mr. SCHWABE. And there is a tendency for them to specialize very early in their profession in very special lines of work?

Dr. CRONIN. I think that was an aftermath of the past World War.

Mr. SCHWABE. Yes; and with the emergency that now exists there is an unusually heavy draft on the medical men that is abnormal, is that not true?

Dr. CRONIN. There are demands tending to reduce the number of civilian doctors.

Mr. SCHWABE. And that will mean a further shortage or further ill distribution of doctors throughout the country, is that not right?

Dr. CRONIN. That is a possibility.

Mr. SCHWABE. And if that is true, then the matter of hospital construction in one respect would help that situation; and in other respects, maybe we would not need to build so many hospitals, since we may have fewer doctors per patient.

Dr. CRONIN. That is correct.

Mr. SCHWABE. And if we have not got enough doctors to man the hospitals we do not need the hospitals?

Dr. CRONIN. I would not say that. I would say the need would still be existent but the people would not get the hospital service.

Mr. SCHWABE. All right, that is probably more accurate, your statement, and I will accept the amendment. But those are very acute problems that we must face, it looks like, in the immediate future. Is that not correct?

Dr. CRONIN. Yes, Mr. Schwabe. I think we have been facing them a little bit through the Hill-Burton program. The hospitals that have been built, over 500 that I described the other day, in areas where we have never had hospitals before, are attracting physicians to those areas and also permit the physicians' services and time to be conserved in treating patients because the patients are accumulated

for them and they have access to them without having to dissipate their time by going to the patients at geographical distances away.

Mr. SCHWABE. But along that same line there has been a much larger number of people who are going to hospitals in the last few years because hospital space is more readily available and they have various methods of paying for hospitalization that they did not have before. Is that not true?

Dr. CRONIN. That is correct.

Mr. SCHWABE. And so we have the demand for hospitals or hospital space having increased considerably in the last 3, 4, or 5 years.

Dr. CRONIN. I would say that is primarily true because the hospital, as we have progressed under our present cultural pattern from the early part of this twentieth century, have become the health centers for the community. The hospital is really the mobilization depot for medical science in the way of precision equipment and laboratory facilities and is the place where the physicians can get those services they need so badly for their patients.

Mr. SCHWABE. It makes that much more readily available to them.

Dr. CRONIN. That is right.

CARE EXERCISED IN THE CONSTRUCTION OF HOSPITALS

Mr. SCHWABE. Now, in the building of these hospitals we are going to have to exercise more care in the future probably than we had to in the past, I take it, because although we have not reached a point of saturation at the same time we should be approaching it the more as we get more hospitals and in certain localities where they have never had hospitals before they have them now; and that will extend itself to the point where there will be still further demands or requests or applications for the building of hospitals in places which have never had them before, and which probably will create difficulty in time—is that true, that you are going to have to be on guard a little more carefully as we proceed with this program?

Dr. CRONIN. At the present time we have only sufficient hospital beds in the country to meet 51.5 percent of our established needs.

Mr. SCHWABE. That is all right, but I have in mind various sparsely settled communities where they want hospitals, that is, the local people, they might want a hospital in every county in the State, every sparsely settled county; whereas I know and doctors recognize the fact they just cannot have them there, the conditions will not justify them. Now, as we go on and build these hospitals we are going to have to watch and be on our guard against being over-influenced by the peoples' demands in these large sparsely settled communities. Is that not true?

Dr. CRONIN. That is correct, Mr. Schwabe, and one of the provisions of the Hill-Burton program was established primarily to take care of that situation. That is through the establishment of advisory councils in each State.

Mr. SCHWABE. The advisory councils would likely be more influenced by the local people than you would be.

Dr. CRONIN. The State advisory councils are instrumental with the State agency in the preparation of the State plan for that State which must be approved by the Surgeon General. One of the provisions of that plan is the establishment of what is properly referred to as a

coordinated hospital system whereby the smaller hospitals are enabled to provide the services that the patients would need in their community by calling upon hospitals of larger size with more specialists. The coordinated hospital system is a procedure which is working out very well and is a very good plan for the alleviation of needed hospital services in areas that primarily cannot afford to have the whole gamut of hospital services.

Mr. SCHWABE. I know of that hospital set-up and that is one thing you have inspired the development of under this program a great deal.

Dr. CRONIN. That is our goal.

Mr. SCHWABE. Where for instance 1 day a week a specialist in eye, ear, nose and throat would be in one of those small hospitals where maybe they could not maintain one; and maybe another and different specialist would come on another day of the week from the larger centers. That is what you are talking about?

Dr. CRONIN. That is correct, yes.

Mr. SCHWABE. I do not have any more questions.

EFFECT UPON PROJECTS IF APPROPRIATION WAS DELETED

Dr. HEDRICK. Doctor, suppose a hospital is under construction and two-thirds finished, say; in other words, the Government has contributed to it on two different occasions and all at once the appropriation is cut off completely. What would happen?

Dr. CRONIN. It would depend, Dr. Hedrick, upon the architectural stage at which that hospital was at the time. Part of the hospital would undoubtedly be closed up and it would be utilized as much as could be possible to a very great disadvantage of the medical men trying to accord service to the patient and to the very great disadvantage of the patient seeking service from that institution.

Mr. HEDRICK. Do you think the State would go ahead and try to finish that job?

Dr. CRONIN. I would doubt very much if every State in the Union would. Some States would but some of the States I think would be unable to do so.

FEDERAL AND NONFEDERAL SHARE OF COSTS, BY STATES

Mr. HEDRICK. What is the allotment of most of the States for this, by percentage?

Dr. CRONIN. It varies from—the State allotment?

Mr. HEDRICK. Yes.

Dr. CRONIN. It is only in 16 States where the States contribute anything to this program of building hospitals. The Federal Government's percentage at the present time is averaging about 47 percent although it varies from 33⅓ percent to 66⅔ percent. The local community puts in the difference between what the Federal Government gives and what the State will give; but as I said only 16 States contribute anything from State funds. Most of the projects in most of the States are made up from Federal funds and local funds with no State funds whatsoever.

Mr. HEDRICK. Funds from the towns and counties.

Dr. CRONIN. That is right, their contributions.

Mr. SCHWABE. And private subscriptions.

Dr. CRONIN. Yes; and gifts.

Mr. HEDRICK. Do you have a table showing the ratio the States and localities contribute?

Dr. CRONIN. We can submit one for the record.

Mr. HEDRICK. We will be glad to have it.

Mr. SCHWABE. You mean with reference to States?

Mr. HEDRICK. The States.

Dr. CRONIN. Federal share and local share and State?

Mr. HEDRICK. That is correct.

(The table referred to is as follows:)

Federal shares for projects fiscal years 1950 and 1951

State or Territory	Federal share	State and local share [1]	State or Territory	Federal share	State and local share [1]
	Percent	*Percent*		*Percent*	*Percent*
Alabama	66.6	*33.4	Nebraska	53.3	46.7
Alaska	50.0	*50.0	Nevada	33.3	66.7
Arizona	50.0	50.0	New Hampshire	33.3	66.7
Arkansas	66.6	33.4	New Jersey	40.0	60.0
California	33.3	*66.7	New Mexico	33.3–66.6	66.6–33.3
Colorado	43.3	56.7	New York	33.3	*66.7
Connecticut	33.3	66.7	North Carolina	44.0	*56.0
Delaware	37.6	62.4	North Dakota	46.5	53.5
District of Columbia	33.3	66.7	Ohio	33.3	66.7
Florida	35–65	65–35	Oklahoma	60.0	40.0
Georgia	55.0	*45.0	Oregon	33.3	66.7
Hawaii	50.0	50.0	Pennsylvania	40.0	60.0
Idaho	33.3	66.7	Puerto Rico	66.6	33.4
Illinois	38.8	*61.2	Rhode Island	40.0	60.0
Indiana	50.0	50.0	South Carolina	50–65	*50–35
Iowa	33.3	66.7	South Dakota	50.0	50.0
Kansas	40.0	60.0	Tennessee	52.0	*48.0
Kentucky	66.6	*33.4	Texas	50.0	50.0
Louisiana	65.0	*35.0	Utah	45.0	*55.0
Maine	55.0	45.0	Vermont	33.3	66.7
Maryland	44.0	56.0	Virginia	49.0	*51.0
Massachusetts	33 3–45	66.6–55.0	Virgin Islands	66.6	33.4
Michigan	40–60	60–40	Washington	40.0	60.0
Minnesota	45.0	55.0	West Virginia	62.3	37.7
Mississippi	66.6	*33.4	Wisconsin	45.0	55.0
Missouri	50.0	*50.0	Wyoming	33.3	66.7
Montana	42.4	*57.6			

[1] All local shares except in 16 States indicated by asterisk (*). Ratio of State to local share in these States not presently available.

DETERMINATION OF FEDERAL SHARE

Mr. SCHWABE. How do you determine what should be the share that the Federal Government contributes and the State contributes and the locality contributes?

Dr. CRONIN. In the beginning of this program, Mr. Schwabe, that determination was made by the Congress. It said one-third.

Mr. SCHWABE. That is right.

Dr. CRONIN. But on the 25th of October 1949 in the Eighty-first Congress Public Law 380, as an amendment to Public Law 725, was passed and enacted into law. That law permitted the States and not the Federal Government to establish the Federal share of the projects in the State on flat basis for percentage of Federal participation for all projects in States. It gave the States the alternative of establishing a sliding scale percentage based on the economic need of the community, relative need for beds, and other relevant factors. So the

States now establish the Federal share in every instance; and as I say only 5 of the States have adopted the sliding scale type.

Mr. BUSBEY. Will the gentleman yield?

Mr. SCHWABE. Yes.

Mr. BUSBEY. Why should the States have any right to establish the percentage?

Dr. CRONIN. I can surmise, but it was the express wish of the Eighty-first Congress in passing Public Law 380 that the right to establish the Federal participation be given to the States.

Mr. BUSBEY. I understand that, but that does not mean necessarily I agree with what Congress did. I am trying to get your opinion. What do you think of the States' right to establish the percentage?

Dr. CRONIN. Mr. Busbey, I think that the State perhaps being closer to the situation is in a better position to know all the ins and outs of what the need for Federal money might be in any particular community within the State. Through the State advisory council since it has representatives of the health profession as well as representatives of the consumer public, such as those of labor, the farmer and rural groups, of educators, merchants and the clergy—they would be in a better position to establish that need and the percent of Federal participation.

Mr. BUSBEY. That does not answer my question. I agree those people in the States are in a better position to know their problem; but why are they in better position to determine what the Federal Government should pay for these hospitals? It is a case of policy.

Dr. CRONIN. I think it may go back to a philosophy that the role of government is to do that for the individual which the individual needs and has tried to do for himself but is unable to do. It is felt that a person in need under intelligent management and consideration would be best able to determine how much money he needed to finish up his project or to start a project than someone who is more remote from the place of the man in need.

Mr. BUSBEY. Of course, for your information and for the record, I happen to be one of the individuals in Congress that is fundamentally opposed to the States coming down here to Washington for hand-outs from the Federal Government.

Mr. HARLOW. Mr. Chairman, perhaps there is one thing we have not made clear. The total amount given any State is not affected by this State selection of the percentage of Federal cost. In other words, the State does not get any more or less money out of the Federal Treasury because it elects 66⅔ percent rather than 33⅓ percent.

Mr. BUSBEY. Well, then, is not this program entirely unfair to the smaller communities particularly, that had gone out and raised funds locally and had built their hospital just before this plan went into effect and then the adjoining community comes along and gets a big hand from the Government on their project?

Dr. CRONIN. Mr. Busbey, there were very few hospitals built in this country just prior to the inaguration of this program. During the 10 years of the depression the moneys were not available for the building of hospitals particularly the voluntary hospital or the small private hospital. During the subsequent years of World War II the materials were not available to build hospitals. So we really had, before the inauguration of this program, a period of 15 years

roughly where hospital construction was at a minimum in this country. The great need for hospital service was one of the reasons this program was inaugurated.

Mr. BUSBEY. Well, I know that considerable hospital construction was going on in my community, in Chicago, and in particular there is the Little Company of Mary Hospital, which was raised by issuing bonds and private subscribers contributed.

Dr. CRONIN. There were some. They were particularly small church and other hospitals, built through private interests, philanthropic individuals contributing the money. There were a number of governmental hospitals, State and county, usually of large size built during those years, but they were not answering the needs in areas that are most needy throughout the country such as areas other than urban areas. There were hospitals in urban areas and people were taken care of to a degree; but there were no hospitals in rural areas where patients had to go perhaps 50 to 70 miles to hospitals under hazardous conditions and arduous circumstances.

Mr. BUSBEY. I still think one of the greatest menaces this country has to beware of is this matter of centralization of Government here in Washington; and the more you centralize the Government in Washington and the more Federal bureaus you set up and the more States come in for aids and grants and things of that kind, the easier it is to get away from our constitutional republican form of government in this country. That is all, Mr. Chairman.

SALARIES AND EXPENSES

Mr. HEDRICK. Will you refer to page 46 and go down the line and discuss these items?

Dr. CRONIN. I have a statement I will submit and expand upon.

You will note that while $1,357,000 was appropriated by Congress for this item for fiscal year 1951, a reserve of $100,000 was established with the result that the program is operating with 195 permanent employees on the basis of $1,257,000, 87 departmental, 86 field, and 22 administration. We are requesting $1,220,000 for fiscal year 1952, which is $37,000 less than presently available. Savings are expected to be effectuated by eliminating all temporary and part-time positions through personnel lapses and cut-backs in other objects. Our travel funds and printing funds have been reduced to the minimum amounts necessary to function effectively.

Because of the cumulative nature of the construction phase of the program, while there are 285 projects in the preconstruction phase at present, this figure will not be substantially reduced during 1952. Projects have thus far in the program continued to "snowball" and we have yet to reach the stage where the number of completed projects equals or exceeds the number entering the construction phase.

While there will be a reduction in the number of new projects approved and in the number of projects processed to the construction phase during fiscal year 1952, project workload alone is not an accurate reflection of actual workload. The essential leadership, guidance, and supervision furnished to the States and communities by the Public Health Service and the continuing development of guide materials must be continued throughout the 1952 fiscal year. The task of furnishing technical leadership becomes increasingly difficult as our

projects increase in complexity and scope, particularly with the trend toward the construction of more teaching facilities and university hospitals. Recent events have placed a heavier burden on our staff. In view of certain shortages we are called upon to advise on such matters as alternative designs and alternative structural specifications. We are called upon to advise upon the utilization of substitute material and on what may be regarded as nonstandard equipment items. Increased attention must be paid to careful surveillance of bid and contract procedures and techniques; all this in order to adequately protect the Government's interest and to make sure that such requirements as the use of the lump-sum contract are complied with.

Our staff not only makes a genuine contribution to the defense effort each time it assists a community in its efforts to acquire a hospital but it also is being called upon with increasing tempo to consult and advise on matters of civilian defense. We have and are rendering assistance and advice to appropriate agencies, such as the National Security Resources Board, on problems relating to hospital and disaster facilities in connection with civil defense activities. We were of considerable assistance to the Federal Civil Defense Administration in preparing material for their publication Health Services and Special Weapons. Similarly, we are being called upon to assist in establishing the needs of health claimants for materials, equipment, and supplies. We are working very closely with the priority claimant groups, the NPA and others. Similarly, we are assisting the Atomic Energy Commission with respect to their Savannah River and Paducah projects.

At the field level our regional office staffs, recognized as consultants in the hospital and health facility fields, are taking more active roles in assisting State and civil defense authorities and advising them on emergency planning, planning which will be and is being coordinated with the existing Hill-Burton program.

In closing I should like to point out that the amount requested for administering this program, $1,220,000, is $137,000 less than the amount voted by this subcommittee a year ago when $1,357,000 was approved to operate the program at a $75,000,000 contract authorization level. Economies have been effectuated. I urge the continuation of what we believe to be a minimum staff necessary to administer this program.

Mr. HEDRICK. Who finally decides a hospital is needed in a locality?

Dr. CRONIN. With respect to materials for construction, health supplies and equipment, the first decision as to whether the hospital is needed rests with the State; the second decision to corroborate that rests with the Federal Security Agency as the claimant agency for the hospital construction and domestic distribution of supplies and equipment in the health field. We act as claimants, Public Health Service, FSA, to the National Production Authority who have the final authority to determine whether or not the hospital will receive the materials necessary for construction and the materials necessary for basic replacement of items.

NUMBER AND TYPE OF EMPLOYEES

Mr. HEDRICK. Do you have a table of your employees?

Dr. CRONIN. Yes, sir; that is, we can furnish a table showing their titles and how many are in the regions and in Washington.

Mr. HEDRICK. Yes.
Dr. CRONIN. We will furnish that.
(Table referred to is as follows:)

Salaries and expenses, hospital construction services, Public Health Service—Detail of personal services by activity or project

Operations and technical services	Grade	1950 actual		1951 estimate		1952 estimate	
		Positions	Amount	Positions	Amount	Positions	Amount
ACTIVITIES							
Departmental:							
Chief of branch—Operations	GS–14	1	$9,000	1	$9,200	1	$9,200
Assistant chief of branch—Technical	GS–14	1	9,000	1	9,200	1	9,400
Chief of branch—Operations	GS–13	1	8,000	1	8,000	1	8,200
Chief of section—Operations	GS–13	2	15,400	3	23,200	3	23,800
Construction engineer	GS–13	1	8,000	1	8,000	1	8,200
Architectural engineer	GS–13	2	15,400	2	15,800	2	16,200
Architect	GS–13	2	15,400	2	15,600	2	16,000
Plant operations specialist	GS–13	1	8,200	1	8,400	1	8,400
Public health analyst	GS–12			1	6,400	1	6,600
Chief of section—Operations	GS–12	1	6,600	1	6,600	1	6,800
Health program specialist	GS–12	1	6,800	1	6,800	1	7,000
Health program analyst	GS–12	2	13,000	2	13,400	2	13,800
Architect	GS–12	8	54,000	8	55,200	8	56,400
Architectural engineer	GS–12	2	13,400	2	13,800	2	14,200
Structural engineer	GS–12	1	6,800	1	6,800	1	7,000
Mechanical engineer	GS–12	1	6,600	1	6,800	1	7,000
Electrical engineer	GS–12	1	6,800	1	7,000	1	7,200
Hospital accounting consultant	GS–12	1	7,200	1	7,400	1	7,400
Health economist	GS–12	1	6,400	1	6,600	1	6,600
Public health analyst	GS–11	1	5,600				
Hospital program analyst	GS–11	1	6,200	1	6,200	1	6,400
Pharmacy specialist	GS–11	1	6,400	1	6,400	1	6,400
Equipment specialist	GS–11	1	5,800	1	5,400	1	5,400
Cost analyst	GS–11	1	6,000	1	6,200	1	6,200
Artist-illustrator	GS–9	1	4,725	1	4,850	1	4,975
Exhibits designer	GS–9	1	4,975	1	5,100	1	5,225
Health economist	GS–9	1	4,600	1	4,725	1	4,850
Statistician	GS–9	1	4,600	1	4,725	1	4,850
Cost analyst	GS–9	1	4,850	1	4,975	1	5,100
Clerical-secretarial	GS–8	1	4,325	1	4,450	1	4,575
Do	GS–7	1	4,075	1	4,200	1	4,325
Do	GS–6	2	7,275	2	7,525	2	7,775
Do	GS–5	9	30,150	10	34,375	10	35,625
Do	GS–4	9	27,235	11	33,465	11	34,265
Do	GS–3	9	25,370	7	20,470	7	20,870
Commissioned officers:							
Director grade		2	19,968	3	30,123	3	30,294
Senior grade		6	43,614	7	52,065	7	52,407
Full grade		2	12,222	3	18,774	3	18,774
Senior assistant grade		2	11,205	1	5,859	1	5,859
Total permanent, departmental		83	455,189	87	494,081	87	503,569
Deduct lapses			13,558		14,725		21,677
Deduct savings due to use of former pay scales for part of year			3,975				
Net permanent, departmental			437,656		479,356		481,892
Part-time and temporary positions			15,254		15,250		
Regular pay in excess of 52-week base			1,408				1,486
All personal services, departmental			454,318		494,606		483,378
Field:							
Program director	GS–14	1	8,800	1	9,000	1	9,000
Hospital architect	GS–13	8	62,000	8	62,200	8	63,000
Hospital construction engineer	GS–13	10	77,400	10	79,200	10	79,600
Hospital mechanical engineer	GS–13	3	22,800	3	23,200	3	23,400
Hospital administrative consultant	GS–13	1	7,800	1	8,000	1	8,000
Hospital architect	GS–12	5	33,800	5	33,000	5	32,800
Hospital construction engineer	GS–12	1	7,400	2	13,800	2	13,800
Hospital mechanical engineer	GS–12	6	39,000	6	40,000	6	40,000
Hospital program representative	GS–12	9	59,600	10	67,600	10	68,000
Do	GS–11	1	6,000	1	6,200	1	6,400
Clerical, secretarial	GS–7	2	7,775	2	8,025	2	8,275
Do	GS–5	8	27,175	9	31,150	9	31,900
Do	GS–4	12	36,900	12	37,780	12	38,820
Do	GS–3	9	26,410	9	26,330	9	27,115

Salaries and expenses, hospital construction services, Public Health Service—Detail of personal services by activity or project—Continued

Operations and technical services	Grade	1950 actual		1951 estimate		1952 estimate	
		Positions	Amount	Positions	Amount	Positions	Amount
ACTIVITIES—Continued							
Field—Continued							
Commissioned officers:							
Director grade		1	$10,497	1	$10,497	1	$10,497
Senior grade		3	26,703	6	53,577	6	53,748
Total permanent, field		80	460,060	86	509,559	86	514,355
Deduct lapses			14,258		15,287		22,140
Deduct savings due to use of former pay scales for part of year			3,462				
Net permanent, field			442,340		494,272		492,215
Regular pay in excess of 52-week base			1,626				1,730
All personal services, field			443,966		494,272		493,945
01 Personal services			898,284		988,878		977,323
ADMINISTRATION							
Departmental:							
Administrative officer	GS-12	1	7,400	1	6,400	1	6,600
Assistant chief, grants unit	GS-12			1	6,400	1	6,600
Do	GS-11	1	5,400				
Budget officer	GS-9	1	5,350	1	5,350	1	5,350
Budget analyst	GS-9	2	10,575	2	10,700	2	10,700
Clerical, secretarial	GS-7	3	12,975	3	13,225	3	13,475
Do	GS-6	1	3,575	1	3,700	1	3,825
Do	GS-5	4	13,400	4	13,775	4	14,150
Do	GS-4	3	9,505	3	9,745	3	9,825
Do	GS-3	2	5,860	2	5,940	2	6,020
Do	GS-2	1	2,690	1	2,770	1	2,850
Do	CPC-3	2	4,824	2	4,904	2	5,064
Commissioned officers:							
Assistant surgeon general grade		1	12,738	1	12,738	1	12,738
Total permanent, departmental		22	94,292	22	95,647	22	97,197
Deduct lapses			2,776		2,965		4,183
Deduct savings due to use of former pay scales for part of year			902				
Net permanent, departmental			90,614		92,682		93,014
Regular pay in excess of 52-week base			337				363
01 Personal services			90,951		92,682		93,377
Total net personal services			989,235		1,081,560		1,070,700

Dr. CRONIN. There are 87 in our technical staff and then there are 22 administrative or 109 altogether in Washington; 86 work in the field. I would like to point out there, Mr. Chairman, that of the 87 technical staff in Washington, they are essentially to support the field operation because much of our operation is also field in nature. We have on the technical staff in Washington for instance, an electrical engineer; we have a structural engineer; and we have a specifications expert; and an estimating expert. We do not think it would be proper to staff all our regions with that type of personnel at this time because of the need for them in each region would not justify the establishment of such personnel in each of our regions. We try to cover that from central headquarters and send a man out. In the case of an electrical engineering problem we send out the electrical engineer to solve or discuss any of the problems that may come up in the field in that work, and in that way we feel we can conserve on personnel.

NUMBER AND LOCATION OF REGIONAL OFFICES

Mr. HEDRICK. How many regional offices do you have?

Dr. CRONIN. We have 10, and they coincide with Federal Security Agency and Public Health Service regional offices.

Mr. HEDRICK. Do you operate in the same office or separate offices?

Dr. CRONIN. Usually the same office but a different section of the same office. The 10 regional offices are located in Boston, Mass.——

Mr. HEDRICK. Will you put in a list showing where they are located?

Dr. CRONIN. I would be glad to.

Mr. HEDRICK. Thank you.

(The list referred to is as follows:)

Regional offices

Region No.—	*Location*
I	Boston, Mass.
II	New York, N. Y.
III	Washington, D. C.
IV	Cleveland, Ohio.
V	Chicago, Ill.
VI	Atlanta, Ga.
VII	Kansas City, Mo.
VIII	Dallas, Tex.
IX	Denver, Colo.
X	San Francisco, Calif.

PERSONNEL IN REGIONAL OFFICES

Mr. HEDRICK. What personnel do you have in these regional offices?

Dr. CRONIN. In each office the staff consists of a program director who in all but one instance is a physician and in that instance the program director is a hospital administrator of many years experience. The rest of the regional staff consists basically of an architect, mechanical engineer, a structural engineer and program representative who is an individual trained in the field of medical-social economics, and the subordinate clerical staff to support those technically trained people.

ESCALATOR CLAUSE IN CONTRACTS

Mr. BUSBEY. Dr. Cronin, in the lump-sum contracts that you let, is there not a provision known as an escalator clause with the contractor?

Dr. CRONIN. No, sir.

Mr. BUSBEY. There is no escalator clause?

Dr. CRONIN. There is none. We do not favor the escalator clause, Mr. Busbey, at this time.

Mr. BUSBEY. Well, I want to congratulate you on getting your contracts through without an escalator clause in them because so many contractors these days will not take a job unless you do have an escalator clause to protect them against increasing prices of materials. I think we are all agreed that every community in the United States is short of hospitals.

Dr. CRONIN. Yes, sir.

Mr. BUSBEY. And that being the case it must be a rather difficult decision in selecting which community should come first under your program, is it not?

Dr. CRONIN. That decision, Mr. Busbey, is all outlined in the State plan and the State plan is made up not by the Federal Government but by the State agency officially designated, usually by the governor of the State, as the agency to carry out this program, but with the help of these advisory councils. The decision is not the Federal Government's as to where the hospitals are to be placed. We enter into the picture when the Surgeon General approves the State plan; but the decision of the State as to where to place the hospital is usually greatly respected. We have not changed any State plan by telling the State, "You put your hospital in this place over here rather than where you want to put it." We do not think that is our function.

Mr. HEDRICK. Thank you very much, Doctor.

TUESDAY, FEBRUARY 27, 1951.

NATIONAL INSTITUTES OF HEALTH

WITNESSES

DR. WILLIAM H. SEBRELL, JR., DIRECTOR, NATIONAL INSTITUTES OF HEALTH
DR. NORMAN TOPPING, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH
ROY L. HARLOW, CHIEF FINANCE OFFICER
DR. LEONARD A. SCHEELE, SURGEON GENERAL
M. A. STEPHENS, BUDGET OFFICER, FEDERAL SECURITY AGENCY
DR. JACK MASUR, CHIEF, BUREAU OF MEDICAL SERVICES
DR. DAVID E. PRICE, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH

OPERATING EXPENSES

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
Appropriation or estimate	$12,075,000	$15,750,000	$15,800,000
Transferred to—			
"Salaries and expenses, agricultural and industrial chemistry, Agricultural Research Administration, Department of Agriculture," pursuant to Public Law 759	----------	−140,000	----------
"Salaries and expenses, plant industry, soils and agricultural engineering, Agricultural Research Administration, Department of Agriculture," pursuant to Public Law 759	----------	−60,000	----------
Adjusted appropriation or estimate	12,075,000	15,550,000	15,800,000
Contract authorization	1,925,000	----------	----------
Total available for obligation	14,000,000	15,550,000	15,800,000
Unobligated balance, estimated savings	−50,970	----------	----------
Savings under sec. 1214	----------	−1,436,100	----------
Contract authorization not required for obligation	−1,925,000	----------	----------
Obligations incurred	12,024,030	14,113,900	15,800,000
Comparative transfer to—			
"Control of tuberculosis, Public Health Service"	−90,000	----------	----------
"Operating expenses, National Cancer Institute, Public Health Service"	−104,430	----------	----------
"Operating expenses, National Heart Institute, Public Health Service"	−84,923	−200,000	----------
"Dental health activities, Public Health Service"	−39,993	----------	----------
Total direct obligations	11,704,684	13,913,900	15,800,000
REIMBURSABLE OBLIGATIONS			
Reimbursements for services performed	1,188,541	1,556,100	1,739,000
Total obligations	12,893,225	15,470,000	17,539,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
1. Grants to medical schools and other institutions and to individuals for research and training:			
(*a*) Research projects	$5,417,342	$7,501,000	$9,000,000
(*b*) Research fellowships	533,729	542,000	650,000
2. Direct operations:			
(*a*) Research	4,872,778	5,110,000	5,385,000
(*b*) Other direct operations:			
(1) Review and approval of research and training grants	543,422	523,900	555,000
(2) Administration	337,413	237,000	210,000
Total direct obligations	11,704,684	13,913,900	15,800,000
REIMBURSABLE OBLIGATIONS			
2. Direct operations:			
(*a*) Research	817,671	1,073,000	1,218,400
(*b*) Other direct operations: (2) Administration	370,870	483,100	520,600
Total reimbursable obligations	1,188,541	1,556,100	1,739,000
Total obligations	12,893,225	15,470,000	17,539,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	1,455	1,484	1,567
Full-time equivalent of all other positions	26	17	12
Average number of all employees	1,354	1,409	1,457
Personal service obligations:			
Permanent positions	$5,035,488	$5,470,843	$5,910,046
Part-time and temporary positions	68,191	49,542	33,104
Regular pay in excess of 52-week base	16,254		20,317
Payment above basic rates	101,635	87,605	77,955
Total personal service obligations	5,251,568	5,607,990	6,044,422
Deduct charges for quarters and subsistence	14,951	11,700	11,700
Net personal service obligations	5,236,617	5,596,290	6,032,722
DIRECT OBLIGATIONS			
01 Personal services	4,379,152	4,522,200	4,800,532
02 Travel	100,137	103,470	121,244
03 Transportation of things	17,960	8,665	10,440
04 Communication services	43,557	43,270	44,885
05 Rents and utility services	77,313	92,100	83,170
06 Printing and reproduction	40,189	45,340	45,980
07 Other contractual services	82,505	66,970	57,250
Services performed by other agencies	20,042		
08 Supplies and materials	633,084	691,070	705,780
09 Equipment	356,498	294,775	271,724
11 Grants, subsidies, and contributions	5,951,071	8,043,000	9,650,000
13 Refunds, awards, and indemnities	176		
15 Taxes and assessments		3,030	5,995
Total direct obligations	11,704,684	13,913,900	15,800,000
REIMBURSABLE OBLIGATIONS			
01 Personal services	857,465	1,074,090	1,232,190
02 Travel	4,299	5,630	4,995
03 Transportation of things	662	1,185	1,060
04 Communication services	11,552	17,240	17,575
05 Rents and utility services	48,631	67,150	69,080
06 Printing and reproduction	9,178	29,110	37,570
07 Other contractual services	26,952	43,130	32,550
08 Supplies and materials	178,698	238,050	264,030
09 Equipment	51,104	80,325	78,020
15 Taxes and assessments		190	1,930
Total reimbursable obligations	1,188,541	1,556,100	1,739,000
Total obligations	12,893,225	15,470,000	17,539,000

Mr. FOGARTY. The committee has before it this morning the National Institutes of Health. Dr. Sebrell, this is your first appearance before this committee, isn't it?

Dr. SEBRELL. Yes.

Mr. FOGARTY. For the benefit of the committee and the record, will you give your record and background and when you were appointed and took over?

BACKGROUND OF DR. SEBRELL

Dr. SEBRELL. I will be glad to.

My name is William Henry Sebrell, Jr.

I obtained my degree in medicine from the University of Virginia in 1925 and immediately entered the United States Public Health Service, and have advanced through the various grades in the service to my present position.

Most of my service career has been spent in medical research. My first duties were in hospitals and quarantine stations for a matter of 2 or 3 years, and then I took up research in nutrition with Dr. Joseph Goldberger, who was working on pellagra. Since that time my entire career of more than 20 years has been in medical research, practically all of it at the National Institutes of Health.

I have assumed various administrative positions there as time went on, and I was made Director of the Institutes in October of 1950.

Mr. FOGARTY. Do you have a general statement for the committee?

BACKGROUND OF THE INSTITUTES

Dr. SEBRELL. I have no prepared statement, Mr. Fogarty.

With your permission, I would like to make a few remarks about the Institutes, perhaps for the benefit of the new members of the committee.

The National Institutes of Health actually started in 1887 as a small laboratory, and over the years has come to be one of the world's great medical research institutions. I think I can say that in all fairness.

We now are composed of seven institutes, namely, the National Heart Institute, the Cancer Institute, the Dental Research Institute, the Microbiological Institute, the Arthritis and Metabolic Diseases Institute, the Institute of Mental Health, and the Institute of Neurological Diseases and Blindness. The two Institutes of Neurological Diseases and Blindness and of Arthritis and Metabolic Diseases were created by Public Law 692 in the last Congress, and we have converted what was formerly our Experimental Medicine and Biology Institute into the Arthritis and Metabolic Diseases Institute. At the present time we have no clinical operations going on in the institutes because of a lack of facilities. All our research is basic and laboratory, except where we cooperate with other agencies.

We have a large fellowship program, and we cooperate quite actively with all prominent voluntary agencies in medical research in the field.

RESEARCH ACCOMPLISHMENTS—NIH

At the last hearing, I believe there was introduced into the record a list of the accomplishments of the National Institutes of Health over a period of several years, and I brought along with me, Mr. Fogarty, a list of accomplishments during the past year. Each one of these is a brief paragraph on some item of research accomplishment at the Institutes, if the members of the committee would like to see that.

I have condensed that down to a line or two on each subject, which would be suitable for the record, if you would like to have something of a more condensed form.

I might mention briefly a few of the programs that may be of special interest to the committee.

INFLUENZA AND OTHER VACCINES

There is a great deal of interest at the moment in influenza, and I believe Dr. Scheele submitted to you a statement of the number of deaths that were caused by the 1918-19 influenza epidemic. In round figures, that epidemic killed half a million people in this country in a period of about 10 months.

As you know, there is quite an epidemic in England, has been for the past several months, and we are more or less in the midst of a mild epidemic in this country at the present time. It isn't serious, but there are a number of cases around.

At the Institutes we are the national center for the collection of influenza data and the coordinating center for influenza research. The influenza virus is a changing strain, so that it is not possible to produce an assuredly effective vaccine until research workers can isolate and identify the particular virus strain causing the epidemic. We hope you will be able to see some of that work this afternoon on your visit to the Institutes.

One of the difficulties is the rapid production of a vaccine that is antagonistic to a current virus, in a current epidemic. Along that line we have secured a strain of the present influenza virus from England and we used it to see how quickly our drug houses could produce a suitable vaccine against it.

I brought along with me four bottles of vaccine that have recently been made in drug houses in this country from the British virus. This order was placed about January 23 and we had the vaccine in hand early in February, so we think that, with our present techniques and the rapidity with which we can move, we can produce a vaccine against a new strain of virus that happens to come along in time to be of some real usefulness.

Along with this vaccine production, I believe Dr. Scheele mentioned to you the typhus vaccine and its use by the Army, and I thought you might like to see a vial of the typhus vaccine now being used by the Army.

It was produced at first in the National Institutes of Health laboratories. It is now commercially produced, of course, but it is controlled in our Biologic Control Unit, which controls the sterility and safety of all vaccines and serums.

In that same laboratory we have the only laboratory in North America that produces yellow-fever vaccine, and here is a sample of yellow-fever vaccine produced in our own laboratory, and that is going on constantly.

THE NATIONAL BLOOD PROGRAM

In addition to this type of program, we also are very active in the research and development aspects of the national blood program. I know you gentlemen are fully aware of how important blood is in the treatment of injuries and in wounds, and things of that kind.

There are a number of difficulties with the present preparation. Whole blood has to be handled very rapidly. It cannot be kept for more than 21 days, and it therefore has a limited usefulness because of the rapidity with which it deteriorates. It would be very advantageous if we could get some preparations of whole blood which would be stable for much longer periods of time.

There is also the possibility that we may produce blood fractions, that we can divide the blood up into various parts and use the parts more efficiently than the whole blood. Along that line the dried blood plasma, which is now being used in Korea, is shipped in this type of container. This is the way it goes out. This is a typical unit that requires another bottle of water, which is attached here, with a double-ended needle. This is under a vacuum and the water is sucked in here, and that goes into a solution. That is hung on a rifle butt or something and put into the soldier's veins.

You can see that has distinct disadvantages to it. One of the preparations that has recently been developed in that program is this. This is called stable plasma-protein solution. That is made from blood. It doesn't require anything except to put it in the vein. It can be handled in a plastic bag without trouble at all. It requires no dilution and, if it is successful, as we hope it will be, it will be very useful. This is still an experimental product. We hope it will offer a great contribution to the handling of this problem.

Here is another example. As Dr. Hedrick knows, this is a simple thing that is quite important. We always have difficulty with blood clotting in needles as you draw blood in a syringe. Here is a new needle which can be used and in which the blood cannot be made to clot.

That is an electropolished stainless steel tube in which a quaternary ammonia compound has been deposited, so the blood will not clot in that needle.

Along woth that, in place of these bottles here is a new development for collecting blood. Here is one of those nonclotting needles on a plastic tube, attached to a plastic bag that has an anticoagulant in it, and there you have a bag full of blood that is ready for transfusion without further handling and is in a nonbreakable container.

Mr. FOGARTY. These examples that you are showing us are developments of the National Institutes of Health?

Dr. SEBRELL. No; they are under our grant program. Some of them are in the National Institutes' work. Most of the work is done by our grantees. A great deal of this is under Dr. Cohn's laboratory at Harvard. That has been the center for much of this. There are

several other laboratories that have been involved in this, including our own workers. I am giving you the results of the whole program.

We were asked to take on this work by Mr. Symington and by General Marshall, and, in addition to the developing of these products and fractions, which is going on very actively at the present time and must have continued support if we are going to continue to make progress, we have responsibility for the safety of the blood collected by the blood banks.

We have to inspect the blood banks, approve their techniques, and the Army won't accept blood that isn't from one of our approved collecting stations. That gives us quite a large responsibility in this blood program in which we need a few more men right now to carry out our responsibilities adequately.

ACTH-CORTISONE RESEARCH PROGRAM

Another field of research in which this committee showed great interest last year was the ACTH-cortisone field, and we have been supporting very actively an intensive program in this field.

I will just cite one little piece of research we have done—our own chemists in collaboration with the Department of Agriculture. We have started to look for plant sources of starting material to make cortisone. The principal reason for the shortage of cortisone and ACTH is that they must be made from animal products and you have a limited amount of starting material. Cortisone starts from bile. That has to be obtained from slaughterhouses. There can only be so much raw material.

If we had a plant source, we could look forward to an unlimited supply and possibly some special crops. So we have been looking over the plant field. The agricultural chemists had found a substance in tomato vine and leaf called tomatidine, which our chemists identified the structure of and have carried to a point where we can make sex hormones.

I have some small laboratory samples of these materials made from the stems and leaves of tomato plants. We think there is a possibility that we can go beyond the sex hormones (they are in the same chemical series of compounds) and that we can make cortisone from this material.

Mr. DENTON. What is cortisone?

Dr. SEBRELL. Cortisone is the new drug that is being used to relieve arthritis. It is a very wonderful compound in a lot of diseases, developed especially for arthritis. I will mention it again in just a minute.

We are not sure yet whether we can make cortisone from this, but at least we can make sex hormones from it. It may turn out to be a very important contribution.

I brought along a list of the accomplishments in the cortisone-ACTH field, so that you might have that for the record.

Mr. FOGARTY. Why don't you go down that and tell us about it?

Dr. SEBRELL. I mentioned the problem of yields and the source material, and the need for plant sources. The ACTH and cortisone have been shown to be beneficial in the treatment of acute rheumatic fever. That is quite a dramatic thing. I brought along here a pic-

ture of a child with acute rheumatic fever and, as you gentlemen know, that is the principal cause of heart disease in young people. That child was treated with ACTH and you can see the dramatic difference that it makes in a child with acute rheumatic fever.

Mr. DENTON. Is that other picture of the same child?

Dr. SEBRELL. Yes; that is the same child. It is the same child 20 days later. That is after 20 days of treatment with ACTH.

Mr. FOGARTY. Do you know whether or not that is a permanent aid?

Dr. SEBRELL. Yes; it is. It is an acute infection that is cleared up under this treatment.

Mr. SCHWABE. This is a specific?

Dr. SEBRELL. Yes.

There is one point we still are not quite sure of, and that is whether or not it is going to completely clear up the heart condition.

Mr. SCHWABE. It may leave an impairment?

Dr. SEBRELL. It may leave some impairment. We are not sure on that point.

We are putting quite a bit of money into that project at the present time in order to clear up just exactly how it should be used and what it will do in rheumatic fever. It is such an important disease. We are attempting to find the best dosage schedules and in rheumatoid arthritis it has been necessary to inject this material. It would be very desirable if we could give it by mouth. We are trying to develop an oral administration method.

It has been demonstrated that it is very valuable in the treatment of gout and some of our grantees have been trying it on multiple sclerosis. There we are uncertain whether it is going to do anything or not. It isn't encouraging in that condition.

Patients with leukemia and lymphosarcoma have been improved. They were not cured, but they showed some improvement, and it looks as though it may be a research lead. I wouldn't say that it is going to be of any real value.

Mr. SCHWABE. Those leukemia patients, are they mostly infants or adults?

Dr. SEBRELL. They were children, I believe. Some of them were adults. They were old cases with remissions. They weren't new cases.

It has been used now in the treatment of burns with some reported remarkable results. Here is an individual with a third-degree burn on the body in which the skin is completely lost over the whole back. Following treatment with ACTH, here the skin is regenerating, and you don't see the horrible degree of scarring that you usually see with a third-degree burn of that magnitude. It appears that the healed area is not scarred as is usually the case, and the individuals do not seem to have as much pain by any means as a burned person usually has; a few days after the beginning of administration they can walk around, and they do not require the extreme care to avoid the severe pain that they have. They also stop losing fluid. There is a tremendous amount of oozing that takes place through this.

They lose body fluid and protein. That stops it, and helps maintain their condition.

Mr. HEDRICK. Is that applied to the burn?

Dr. SEBRELL. They apply it by injection.

Mr. HEDRICK. Does that accompany a saline-solution application?

Dr. SEBRELL. Locally, they usually apply pressure dressings to these things.

Mr. HEDRICK. They use a lot of saline solutions.

Dr. SEBRELL. This doesn't require it apparently.

After you start ACTH or cortisone the reports are that the pain disappears and that the oozing stops. The oozing gives you trouble.

They do not seem to become so severely infected for some strange reason. That is still in the experimental stage. It is being tried out in Korea right now. Of course, where it is receiving further investigation in this country, there are several centers in this country where they have burn cases available.

There are many allergic conditions that respond to it. It seems to be very useful in hay fever and asthma.

There are some very severe inflammations that respond very beautifully to cortisone.

There is a disease called disseminated lupus erythematosus, which is improved by prolonged treatment.

Mr. FOGARTY. What is that disease?

Dr. SEBRELL. It is a very severe skin disease that is eventually fatal.

Dr. TOPPING. Nobody knows what causes it.

Mr. FOGARTY. Do you have another name for it?

Dr. SCHEELE. It looks like eczema.

Dr. SEBRELL. It is a very severe disease that kills these people.

Mr. HEDRICK. Fortunately, it is not very common.

Dr. SEBRELL. No; it isn't very common.

These are some of the accomplishments in this field. As you were told last year by Dr. Dyer, these compounds open up a new field of medical research. We are still getting new and strange reports that we still have to seek explanations for.

One other item of some interest perhaps is——

Mr. SCHWABE. As far as arthritis is concerned, you do not know what the results are going to be?

Dr. SEBRELL. In rheumatoid arthritis it is very effective in relieving and restoring mobility.

Mr. SCHWABE. Where it has affected the heart also?

Dr. SEBRELL. Perhaps you are getting it confused with rheumatic fever. If the heart damage has occurred from rheumatic fever, you cannot do anything to that with cortisone or ACTH. You cannot correct the damaged heart valve.

In rheumatoid arthritis where you have crippled hands and legs, you restore those people to functioning individuals. It is one of the most remarkable things that has been seen in medicine.

Mr. BUSBEY. Is there any cooperation between your departments and the Armour Laboratories and its director, Mr. Victor Cosgrove, on ACTH?

Dr. SEBRELL. I believe Dr. John Mote is their medical research man at Armour's whom we talk to. We have visited at their laboratory. We keep up with their production, with the research work that they do. We interchange information. We attend their conferences, and they attend our conferences. We keep in very close touch with what is going on both ways.

Mr. BUSBEY. What percentage of the arthritis cases that are treated with cortisone show ill effects afterward?

Dr. SEBRELL. When the treatment with this drug was first started, there were some ill effects quite frequently, because the dosage schedule wasn't known, and it had to be worked out. Now we have learned how to handle it, and, with the improved dosage schedule, there aren't nearly so many deleterious effects and not as serious ones as there were in the beginning.

I may say that these compounds are very potent substances, of course, and, if you use them in too large a dose and not under the right conditions, you can get some bad effects. But when you know what they are and how to look for them and what a better dosage schedule is, they are being minimized in a great degree.

In an individual who is in great pain as a result of a very severe arthritis, he would rather have some little side effects and be relieved of his pain.

You have to weigh one thing against another in the use of the drug. You have to use medical judgment in using it in every case.

Mr. BUSBEY. Are there a certain percentage of those cases that have been cured without any ill effects?

Dr. SEBRELL. This doesn't cure arthritis. This relieves the pain and gives them greater mobility.

Mr. SCHWABE. It arrests the progress.

Dr. SEBRELL. Yes; and it does even more. It will restore mobility and make them useful again. Some of you may have seen in the past months in Life that there was a famous French painter, Dufy, who was brought to Boston by Dr. Homburger. Dufy had given up painting because his hands had been so crippled by arthritis. He was started on cortisone and he is back painting again. He is one of the great painters of the day and he is back painting again. He is relieved enough to use a paint brush. His hands are terribly deformed, but he can still use them. He is still not cured of arthritis.

Dr. TOPPING. May I add one comment. As you will remember, the committee increased the amount of money for the ACTH and the cortisone program; because of the difficulties in the appropriations last year, however, that money did not become available for expenditures to the grant programs until about the first week in October. So actually the full results of this year's program is hardly available at this time, since only about 4 months have elapsed since some of those grants have been activated.

SALT SOLUTION FOR SHOCK TREATMENT

Dr. SEBRELL. Mr. Fogarty, you asked especially about the research being done in the NIH in the blood program. I think I should mention there again an item that was mentioned by Dr. Scheele and that was the discovery of the use of salt solution in the treatment of shock.

I brought along just a couple of pictures to show you very hurriedly just what that will do in the experimental animal. Here is a group of mice who were burned with hot water, so that they were in burn shock, and they weren't given any treatment. As you can see, they all died.

These were handled in exactly the same way. The only difference in the two groups is that this group was given a little bit of salt water

by stomach tube, normal saline. As you can see, there is one dead animal, but there is a high percentage of survival.

You will see that demonstrated this afternoon, so I don't intend to dwell on it at this time, except to point out the possibly very great usefulness of that in an emergency. It won't substitute for blood or for plasma, but in a disaster, in the emergency handling of people acutely shocked, this work indicates that, if you give them dilute salt solution by mouth you can save a lot of lives. We think that is one thing that should be done in all the plans for handling emergencies. We know quite well that you are never going to get large amounts of these blood preparations where they can be given to thousands of people in the first few hours after some sort of disaster.

This could well be an important life-saving measure, although it is so very, very simple.

SUBSTITUTES FOR OPIUM

I have just one more item in connection with our work that I want to mention, and that is the problem of narcotics. As you know, we have always been dependent upon the importation of opium into this country in order to prepare morphine, codeine, and the various pain-relieving drugs. Most of our opium comes from China and the eastern end of the Mediterranean. If we should be cut off from an opium supply, it could be a very serious thing unless we had a substitute. Therefore, for some years our chemists have been working on the problem of obtaining a substitute, and not only have our chemists discovered one, but there were a couple that had been discovered in Germany during the war and not developed too much, and they were brought to this country and have been developed.

And at Lexington, Ky., we operate the only laboratory in the world where the addicting qualities of a drug can be studied, because every one of these drugs constitutes an addiction hazard. We cooperate quite closely with the World Health Organization and in that laboratory the clinical studies are made of the addicting potential of any of these drugs.

I brought along commercial samples of two of the substitutes. One is called Methadone and the other is called Metopon. With these and with modifications of these that we have, we feel we are now in a position to be completely independent of any importation of opium if we have to.

These in some ways are even superior to morphine in that they have a longer action. One of the troubles with morphine is that the effect wears off too quickly. Some of these will last a couple of hours longer. You can give these by mouth or hypodermically.

They are suitable for the relief of pain. They are just as good as morphine.

Mr. DENTON. What are they made from?

Dr. SEBRELL. Coal-tar derivatives. They are made from the basic chemicals you get from coal tar. We are not dependent upon importation of anything to make them. We cannot synthesize the morphine, because it is a very intricate chemical and the chances of actually synthesizing morphine are not very great. We have something just as good now.

Mr. FOGARTY. Isn't there some plan being developed to grow opium in California?

Dr. SEBRELL. There were some plans. I guess it will continue. There still are those plans, I suppose. They do not come under our control. As I know those plans, what little I know about them is that there is a small acreage designed to produce poppy seeds for possible planting if it were necessary.

You might say, "Why don't you grow poppies and produce your own opium? Why bother with the synthetics? Why not make agricultural crops with it?"

The difficulty with that is that the harvesting of opium is a terrific hand labor problem. You have to collect the fluid just off the poppy flower before it opens, and, if a bad storm comes along and they all get knocked on the ground, your crop is lost, and it has to be hand collected, so the labor and the hazard of doing it are not very attractive as an agricultural project.

While it is worth while to consider it as an emergency deal, in our opinion, the synthetics are much more satisfactory. Also, we know very well that a number of doctors are still going to insist on the old stand-by and not like the new synthetics no matter how good they are.

Finally, the National Institutes of Health serve to coordinate the activities of these seven institutes I have mentioned to you. The directors of the other categorical institutes will testify for the work of their particular institutes and we therefore have not mentioned their work here.

I do not think I need to bear down on the point to this committee as to what this type of activity means in conservation of national resources and in the conservation of manpower in making sick people more available to work at a time when we need all the manpower we can get.

Mr. FOGARTY. Thank you, Dr. Sebrell.

SUMMARY OF RESEARCH ACCOMPLISHMENTS

I will have inserted in the record at this point the table of research accomplishments of the National Institutes of Health and the table of research accomplishments in the field of ACTH and cortisone research.

(The documents described above are as follows:)

SELECTED RESEARCH ACCOMPLISHMENTS IN ACTH-CORTISONE RESEARCH RESULTING FROM PUBLIC HEALTH SERVICE RESEARCH GRANTS

More than one-half of all reports at recent symposia covering this field were the work of our grantees.

Improved chemical processes for production of cortisone.

The yield of ACTH from slaughterhouse glands has increased more than ten fold during the past year. Several grantees produced information that contributed to this increased yield.

Progress toward an understanding of the chemical nature of the active portion of the ACTH protein has been made by the demonstration that the protein can be broken into small molecules some of which retain the distinctive activity.

ACTH and cortisone are beneficial in the treatment of acute rheumatic fever. Standards for administration and the selection of responsive cases have been determined.

Optimum dosage schedules have been sought for the treatment of rheumatoid arthritis. It has been demonstrated that cortisone is effective when administered by mouth.

In the treatment of gout ACTH and cortisone are particularly beneficial when used with colchicine, an old remedy for gout.

Multiple sclerosis results reported by our grantees have not been very encouraging. Progression of the disease may have slowed during treatment but this is difficult to assess because of the uncertainty of progression of the untreated cases.

In malignant diseases, improvement in patients with leukemia and lymphosarcoma have been reported. Since cure was not attained, principal interest lies in determining the underlying reason for the spectacular temporary improvement.

ACTH or cortisone promotes the adherence of skin grafts on burned areas.

ACTH and cortisone reported beneficial in treating frostbite.

A test dose of ACTH aids in determining the ability of patients to undergo surgical operation.

ACTH or cortisone is useful in postoperative treatment in certain kinds of patients.

Many allergic conditions respond.

Inflammatory reactions in the eye respond to cortisone administered as eye drops.

Prolonged treatment is required by severe cases of disseminated lupus erythematosus.

Many skin diseases, particularly those of allergic origin, are benefited.

Several blinding eye diseases of obscure origin are dramatically improved and vision is conserved.

ACTH and cortisone produce remission in ulcerative colitis, at least during the time of treatment. ACTH is of benefit in the kidney disease known as nephrosis. Cortisone is also beneficial but its mode of action in nephrosis is quite different from that in arthritis. Cortisone may be used to suppress the production of masculinizing hormone by an overactive adrenal gland.

Cortical hormones are produced by an adrenal gland which has been removed from the body and kept alive in the laboratory. These perfusion experiments are giving information concerning the chemical transformations that occur within the gland.

ACTH may be used to identify potentially diabetic individuals.

Selected Research Accomplishments of National Institutes of Health Scientists

Progress has been made in developing standardized techniques for the clinical use of instruments for detecting heart disease. These instruments were previously invented by NIH scientists.

Cooperative studies in universities have shown that various conditions during pregnancy, such as mumps and prolonged bleeding, can result in heart disease in the offspring.

A synthetic hormone related to cortisone was found to prevent liver cancer in rats.

An accurate method was discovered for counting blood platelets. This will aid significantly in the diagnosis of radiation injury.

A method was worked out for determining the size and other properties of airborne particles, such as smoke, dust, and bacteria. This advance may aid in defense against airborne bacterial and chemical agents of destruction.

Instruments developed at NIH made possible the first V–2 rocket photograph of atomic bombardment by cosmic rays, contributing to the understanding of atomic energy.

A new technique was used to purify viruses known to cause cancer in chickens—a step in the direction of understanding the mechanism of cancer causation.

Discovery of the causative mechanism of a creeping paralysis of the brain may provide a clue to the understanding of epilepsy.

Results of a 5-year study show that fluoridation of a public water supply reduced incidence of dental caries in children about 60 percent. The method was previously discovered by NIH scientists.

A chemical agent, sodium fluosilicate, which is much cheaper than chemicals now used for the fluoridation of public water supplies, was shown to be just as effective for that purpose.

It was found that removal of the thymus gland can prevent leukemia in mice, suggesting that the thymus plays a role in leukemia. This is the only form of cancer affected by thymus removal.

Synthetic substitutes for morphine derivatives, including codeine, have been developed. These may relieve the United States of dependence upon imported opium.

NIH scientists in cooperative studies have isolated a substance from the tomato plant which can be transformed into sex hormones, a possible step toward the synthesis of cortisone.

Manpower of the Nation could be appreciably increased through application of standards developed at NIH for evaluating physical work capacity of persons in older age groups.

A technique was developed for injecting a hormone directly into the blood stream in treatment of breast cancer in women.

Clinical studies have shown that abrupt withdrawal of barbiturates, widely sold in the United States, can result in serious mental disorders, demonstrating that these drugs are potentially more dangerous than morphine.

NIH is participating in studies that have provided accurate data on the prevalence and distribution of multiple sclerosis.

Acid-producing micro-organisms have long been implicated in dental decay. NIH studies have narrowed the possible causative organisms to one or two types.

Laboratory tests indicate that certain substances found in the synthetic oil industry can cause cancer. When plants are built, these findings should be considered.

NIH research is elucidating the role of the kidneys in heart failure.

Two leading pharmaceutical houses began production of a mumps vaccine developed largely through NIH investigations. During both World Wars, only respiratory and venereal diseases caused loss of more military man-days than did mumps.

A method was discovered for synthesizing a scarce compound used in the acid phosphates test for prostatic cancer.

Requirements for an improved anticoagulant to be used in the treatment of heart disease have been established.

Atomic Energy Commission requested expansion of NIH studies yielding results that may contribute to an understanding of radiation injury. These are basic studies on blood circulation.

It was shown that diabetes is not caused by a deficiency of insulin alone. Excessive administration of certain hormones can produce it, and the nervous system affects ability of animals to utilize sugar.

Mechanism of kidney damage from dietary deficiency of choline has been largely clarified.

Special techniques for administering whole-body X-radiation to cancerous mice resulted in a high incidence of cures.

In response to requests of State legislatures, NIH psychiatrists and other interested groups drafted a model law governing hospitalization of the mentally ill.

Electron microscope studies of teeth have disproved the theory that minute cracks in the surface of teeth are the sites where decay begins.

In a screening program, 125 chemical agents were found to damage cancer in mice, and two of the most promising drugs, discovered at NIH, are being tested on inoperable cancer patients.

Several commercial firms are preparing to produce amino acids by a process discovered at NIH. This should make ample quantities available for intravenous feeding of patients in clinical studies.

Clinical trials with acetylmethadol, a new drug synthesized at NIH, proved its value in reducing untoward effects of morphine withdrawal. Acetymethadol may have great military value as an analgesic.

Mustard gas and a related chemical, nitrogen mustard, were shown to be highly capable of causing cancer. Nitrogen mustard, like X-ray, cannot only cause the disease, but is useful in treating it.

Studies have shown that a new drug, procaine amide, is effective in treating irregular heart rhythms, which frequently cause death following heart attack.

Methods were developed for assaying strength of chicken-tumor virus, fastest acting cancer agent known. Since action of this virus may be direct, such studies are advances toward understanding cancer causation.

A chemical medium has been developed which permits an accurate count of oral bacteria. On the basis of such a count, special diets that will retard tooth decay can be prescribed.

Previously, tissue cultures could only be grown in clots or on plane surfaces. They are now grown at NIH on three-dimensional matrices, providing ample material for biochemical studies of pure cell strains.

Accurate measurements of the energy requirement in photosynthesis were obtained, contributing to the understanding of carbohydrate metabolism, which is abnormal in cancer tissue.

Contrary to previous belief, moderate exercise following irradiation contributes only slightly as a cause of death. NIH scientists have also shown that poor nutrition may affect chances of survival following irradiation.

Various physicians tested clinically the use of salt solution as a substitute for plasma in treating burn shock. This method, discovered at NIH, should prove valuable in the event of mass casualties in war.

NIH scientists discovered cases of tularemia transmitted by drinking water in Montana. Infected animals have been considered the principal agents of transmission.

NIH participated in cooperative studies demonstrating that onchocerciasis, a major tropical disease, can be controlled with the drug suramin.

Electron microscope studies produced the first picture of viruses in intact tissue, a possible step toward the understanding of virus multiplication, which occurs only in living cells.

Direct observation of tumors in mice, through a window in the skin, helped explain relation of blood supply to tumor growth.

Field trials proved the practicality of using certain drugs developed at NIH for eradicating snails that carry schistosomiasis, a disease prevalent in many theaters of allied operation in World War II.

Clinical tests established aureomycin as the drug of choice in whooping cough.

Terramycin, a new antibiotic, was shown to be effective against amebiasis, of which amoebic dysentery is a well-known form. This disease was an important cause of disability in Pacific areas during World War II.

NUMBER OF NARCOTIC ADDICTS

Mr. BUSBEY. Doctor, hasn't there been a considerable increase in the number of narcotic addicts in the last few years?

Dr. SEBRELL. There have been some reports about the increase in addicts in young people that have been rather disturbing. I think there is a recent series of articles on that done by the New York Times, and our people at Lexington, of whom Dr. Vogel is the chief of the Lexington Hospital, have been very much interested in that problem.

I cannot cite figures to you on the national incidence of addiction or how the addiction is changing. I do not have that data available.

Mr. BUSBEY. Who would have those figures?

Dr. SEBRELL. Dr. Vogel or the mental health people, I suppose.

Mr. HARLOW. The Bureau of Narcotics of the Treasury Department would have more information than anybody else.

Mr. BUSBEY. At the institution at Lexington are the applicants more numerous in the last year or two than previously?

Dr. SEBRELL. I do not have the data.

Mr. TOPPING. As you know, Mr. Chairman, our connection with the Lexington Hospital is the small laboratory for research in morphine addiction. The National Institutes of Health have no figures and no responsibility for the administration of the hospital.

Dr. SCHEELE. Mr. Masur may have data available on that question which you have asked.

Dr. MASUR. We would be glad to give you the exact figures. I can tell you the number of applications for care at Lexington has increased

to the point where we have a long waiting list, and it is now necessary to convert 300 beds at our Fort Worth hospital for the treatment of patients.

At Lexington we have 180 persons under the age of 21, without facilities for segregation of them. It has been necessary to mix them with the recidivists. We are working on that problem.

That figure increased in the last 3 or 4 years from about 40 to 180 as of a month ago, when I had the figures. It is a subject of great concern to the police authorities and to the narcotic-control officials.

It looks as though these additional 300 beds at Fort Worth will carry us for awhile.

Mr. BUSBEY. I know the authorities in Cook County, in Illinois, are giving this a great deal of thought, and there is a committee coming down here to Washington in the very near future, composed of the State's attorney, the sheriff, and the president of the county commissioners, and other people who deal with the law, and I was looking for information, so I would be fortified when they came down here and know a little something about their problem before they arrived.

DRUG ADDICTION OF TEEN-AGERS

Dr. MASUR. We will be glad to give you the figures. I understand that the preponderance of the teen-agers who are now in our institutions comes from New York and Chicago.

Mr. HEDRICK. Which are most prevalent, boys, or girls?

Dr. MASUR. I am not sure of the exact figures. But, as I remember the figures from Dr. Vogel, they have both. Without going into the details, it is an appalling story of the children starting off with marijuana, and for an additional kick they get over into heroin. The result is that they do not have the money for it. The boys leave school and start stealing; the girls leave school and go into prostitution, and then you have the unfortunate sequence of events that brings them into a Federal court and being sent to Lexington for treatment.

It is with that in mind, to make room for these people, that we have to make additional room available at Fort Worth for some of the other types of addiction.

We will furnish you with the exact figures.

Mr. SCHWABE. Is there any importation of heroin?

Dr. MASUR. Heroin is forbidden to be manufactured. There is a very small amount of it under the control of one country. There are still some old physicians who feel that a small amount of heroin in the cough mixture is needed. There is no substitute for it. It is manufactured.

Of course, its importation into this country is forbidden.

Dr. TOPPING. There is a very interesting articles in this week's Time on teen-age addiction, if you haven't had a chance to see it.

Mr. SCHWABE. This Fort Worth institution was a military installation, to start with?

Dr. MASUR. During the war, sir. We used a proportion of the beds for psychiatric treatment on an exchange basis.

Dr. SEBRELL. We are concerned only with the research phases of this. The care and handling of these patients comes under Dr. Masur's Bureau. The people in the Research Bureau cooperate with our chem-

ists and pharmaceutical people here at Bethesda. They prepare new synthetic preparations, and they test them with the patients at Lexington.

FUNDS AVAILABLE, 1951 AND 1952

Mr. FOGARTY. Doctor, you had available in 1951, $15,750,000. You had a transfer from that of $200,000, from research and source material, for cortisone, to the Department of Agriculture. That is the work you explained about on these plant materials?

Dr. SEBRELL. That was part of it. You might be interested to know that one possible plant source for cortisone is the strophanthus plant. The strophanthus plant grows in Africa and was used by the natives as an arrow poison, and a certain variety of strophanthus has a compound from which cortisone could be made. So part of the money went to collect samples of strophanthus, to bring them to this country, cultivate them and try to find out whether it would be a plant source.

That has not yielded any cortisone yet. We have found some new chemicals in it, however.

They are also going to various parts of the world to collect other plants that may give us the necessary starting material.

Mr. FOGARTY. Does the budget for the Department of Agriculture have an item this year of their own?

Dr. SEBRELL. That will be carried by them this year.

Mr. FOGARTY. What was this $200,000 for consolidation of the blood program?

Dr. SEBRELL. That was $200,000 that we put into the blood program from the NIH and $200,000 from each of the two other institutes to get this needed research going, where we didn't have an appropriation for this particular item. We saw the urgency for it and needed the money to get it started, and we allocated $200,000 out of these funds for this purpose.

APPLICATION OF 1951 BUDGET RESERVE TO PROGRAMS

Mr. FOGARTY. This $1,436,000 reserve in the budget—where was that cut applied in your program?

Dr. SEBRELL. That was picked up from a variety of sources in the NIH appropriation.

Dr. TOPPING. I can give those to you, Mr. Chairman, if you would like.

As you know, the Congress last year directed the President to make certain savings. We were instructed to place $1,436,100 against that figure. Those figures that make up the $1,436,100 are as follows:

From research projects, general, at NIH, $122,000.

From the ACTH-cortisone money, which amounted to $3,600,000, total reserves of $1,100,000 were placed against those funds. That made a total of $1,222,000 in grant operations.

The Experimental Biology-Medical Institute's reserve of $45,300 was placed against those funds.

On the National Microbiology Institute, $122,700.

On laboratory aids, $12,000.

Scientific reports, $2,000.

Building management, $11,000.

That makes a subtotal of $25,000 for those particular areas, and a total research reserve then of $193,000.

Review and approval of grants, $21,100.

If my figures are correct, that will add up to $1,436,100.

INCREASE FOR RESEARCH GRANTS

Mr. FOGARTY. On your research-grants programs, research projects, you have shown an increase this year of $1,499,000.

Dr. SEBRELL. Yes.

Mr. FOGARTY. Will you explain what grants they are and to what extent?

Dr. SEBRELL. Under that program we are currently financing 765 research grants-in-aid projects by investigators in non-Federal institutions. That constitutes a very substantial support to the whole medical-research program of the United States.

ADDITIONAL RESEARCH GRANTS FOR TWO NEW INSTITUTES

If this increase is granted it will enable us to take care of 153 additional projects and, of that money, we propose to use $750,000 for expansion in arthritis and metabolic diseases, and $750,000 in research in neurological diseases and blindness.

Mr. FOGARTY. That is $750,000 for arthritis and rheumatism and $750,000 for neurological diseases and blindness—those are to get these two new institutes into operation.

Dr. SEBRELL. Yes.

While the Congress created these two institutes, they have never given an appropriation for them, and we have done the best we could with what we have available, but it is inadequate. We need a much better program than we can carry at the present level of financing.

Mr. FOGARTY. What grants have you made this fiscal year for research in arthritis and rheumatism?

Dr. SEBRELL. $645,000 of the funds from the general program went into arthritis and metabolic-disease research.

Mr. FOGARTY. How much in neurological?

Dr. SEBRELL. $300,000 into neurological research from the general program of the National Institutes of Health.

RESEARCH IN THE FIELD OF BLINDNESS

Mr. FOGARTY. In the field of blindness, what are they trying to work out there?

Dr. SEBRELL. The research in the field of blindness on the whole in this country is very inadequate. We have nothing going directly in the field of any consequence, except for these ACTH researches where they benefit eye diseases.

It is a field in which more research is definitely needed. We have no specialists at the National Institutes of Health in this field; no one to take it up. Of course, we would like to have support for some good research projects by other laboratories.

Mr. HEDRICK. What types of blindness are you interested in?

Dr. SEBRELL. We are interested in all types.

Mr. HEDRICK. What types are you trying to investigate?

Dr. TOPPING. There are two particular types of blindness that make up a large percentage of blindness—two particular diseases. They represent well over 60 percent. Those two illnesses are glaucoma and cataract. Those two illnesses alone make up a large percentage of adult blindness.

There has been no research why people have glaucoma and very little research on the causes of cataract. Both of those diseases have been treated—glaucoma not too successfully and cataract quite successfully—by surgery.

Glaucoma is an increase of pressure in the anterior chamber of the eye. That pressure is due to the physiological fact that the fluid is secreted but cannot drain out. As the pressure in the anterior chamber builds up, it puts a great deal of pressure on the nerve and causes it to atrophy.

The surgical operation is to do a surgical puncture and allow the fluid to come out. No one knows why the fluid begins to build up and doesn't drain properly. We feel very strongly that research is needed to go back to the history of these cases of glaucoma, clear back to when they were born, and find out what happened to allow glaucoma to develop. No one knows why it develops.

No one knows why cataracts develop and form in the eye. There is a little lens back behind the anterior chamber of the eye which brings the light in and converges it so the image is back on the retina, like the lens of a camera. In cataract the lens becomes opaque, so it cannot give the impulse to the optic nerve to transmit to the brain.

There have been quite a few cases of cataract in young men working with radioactive material. Perhaps cataract may be due to an unusual amount of light. One of the things we would like to find out is in the areas of the country where a great deal of light exposure is present, such as in the southern part of the country, if there is an increased amount of cataracts in the southern part of the country as compared to the northern part of the country.

Those are the general areas, plus some of the basic work that should go on.

Mr. HEDRICK. There is a certain amount caused by trachoma and injury.

Dr. SEBRELL. That is correct. A lot of that is cataract on the external surface on the cornea of the eye and failure to let the light be transmitted.

Mr. HEDRICK. Hasn't there been a recent discovery where the retina becomes separated from the eye and causes blindness?

Dr. TOPPING. I know very little about it. That disease has been increasingly recognized in children by physicians. The cause is unknown. That is one of the main causes for blindness in children.

The blindness in children was reduced tremendously with the use of silver nitrate on the eye when gonorrhea was prevalent. By law the application of silver nitrate was required on the eyes of the infant at birth in many States, and the result has been a great decrease in the cases of blindness in infants at birth.

Mr. HEDRICK. Is trachoma at present causing much blindness?

Dr. TOPPING. Yes. Fortunately, we have not had a great deal of trachoma in the United States. There are several areas where it is

prevalent. One is in the southeastern part of Missouri and among the Indians, and there are several other places.

Trachoma has not been a disease of great prevalence in the United States.

Mr. HEDRICK. Some of the members of this committee visited the leprosarium at Carville. About 70 of those people are totally blind. Do you know the reason?

Dr. TOPPING. No.

Dr. SEBRELL. I once did a few studies with those patients. That condition is due to the infection. They get a tremendous growth of blood vessels into the cornea that results in blindness.

Mr. HEDRICK. Their inability to take care of themselves probably had something to do with it.

Dr. SEBRELL. All the forms of treatment that anybody can think of have been tried on those eye cases, because they are such terrible things, but there is nothing now that anyone knows that will stop that.

NUMBER AFFLICTED WITH VARIOUS DISEASES

Mr. FOGARTY. Doctor, you haven't provided us with any statistics on the numbers affected by rheumatism and arthritis.

Dr. SEBRELL. It has been estimated that the number of people affected by arthritis in some form in this country is about 7,000,000. That is a widely used figure and includes, I believe, all forms of painful joints, and certainly that many are not completely disabled; but it does affect a large number of people.

I had jotted down some other figures here in other diseases. About 9,000,000 people have heart disease in this country; about 800,000 epileptics; about 175,000 children with cerebral palsy; about the same number of cases of multiple sclerosis.

You understand that those are rough estimates only.

MULTIPLE SCLEROSIS

Mr. FOGARTY. Multiple sclerosis is something you don't know much about.

Dr. SEBRELL. Very little about it.

Mr. FOGARTY. What are you doing about it in the National Institutes of Health?

Dr. SEBRELL. We have some studies going on the distribution of multiple sclerosis. First we had to find out where it occurs, whom it affects, whether it is more prevalent in one part of the country than in another. That study is in progress at the present time.

Mr. FOGARTY. Have you made any advances at all in your research in multiple sclerosis?

Dr. SEBRELL. Not of any consequence. Everything that has been tried so far has failed. We still don't know the cause of it. We still don't know how to arrest it, and it is a horrible disease, in which we terribly need a great deal of research, because we do know so very little about it.

Mr. FOGARTY. About what is the average age that it strikes?

Dr. SEBRELL. I do not believe that is known. These are data that are being collected now which will give us a great deal of basic in-

formation of that type. That is being done in a limited way in several cities.

Mr. FOGARTY. I have been asking for 3 years now about getting something started on that, but there doesn't seem to be much push by anybody.

Dr. SEBRELL. We are putting, I guess, close to $100,000 in it, and we would put more in it if we had it. We had intended to expand it more; when we get our Neurological Institute funds, we certainly will.

Mr. FOGARTY. That will be included in that?

Dr. SEBRELL. That will be an important thing in that field. We have built that up from practically nothing to about the figure I mentioned.

Mr. FOGARTY. These cerebral palsy cases—will that be included in this Neurological Disease and Blindness Institute?

Dr. SEBRELL. Yes.

Mr. FOGARTY. For the first time you will really be working on that problem?

Dr. SEBRELL. Yes. We haven't done anything in that field up to now.

INCREASE FOR FELLOWSHIP GRANTS

Mr. FOGARTY. On your research fellowships you are asking for an increase of $108,000. Will you explain that program, and why the increase?

Dr. SEBRELL. In 1951 we had 172 individuals to whom we granted fellowships in order that they might become proficient as research workers in this field of medical research, and the additional funds here will give us 22 more fellowships which again would go primarily into these two fields of arthritis and metabolic diseases and neurology and blindness. That would add 22 to our present total, including some general medicine.

Dr. TOPPING. May I add a word to that.

As you know, the GI bill of rights gave a very large number of individuals the opportunity to have from 2 to 4 years of educational possibilities depending upon the length of service that they had in the Armed Forces in World War II. This is the year that those individuals are completing, most of them, their education under the GI bill of rights. If they had 4 years and started in 1946, they are now finishing in 1950 and 1951.

The amount of time allowed them to get their bachelor's degree; some of them got their master's degree. Now, when they were in the services or during this interim period, they have gotten married, many of them have children, and we will either lose them as scientists in this country, unless, in some way, they can be given an opportunity to complete their real scientific education, which is their doctor's degree in their particular field and an opportunity to do some research in the laboratory, to make them a finished product.

It is quite important for this year that they have that opportunity and we not lose the possibilities that we had through the GI bill of rights, and of picking up a few additional people and letting them have an opportunity to really become finished scientists before it is too late and they are taken off into other activities.

As you know, the total number of scientists in the country in the physical, biological sciences is quite low. We had quite a fall in the number of scientists during World War II because of the draft policies, and we are just beginning to get back to the level we had in 1941. It is quite essential that the committee recognizes the planning as such, that this is the year when a few additional people on a fellowship program will have an opportunity to become finished products and do finished and independent research.

NEW POSITION FOR BLOOD BANK INSPECTION

Mr. FOGARTY. In your direct operations you have shown an increase of $275,000 and an increase of 81 positions. Will you give us a breakdown on all those positions?

Dr. SEBRELL. Those new positions would be three new positions for the Microbiological Institute where we need additional staff for the control of the blood banks.

Mr. FOGARTY. Those three positions—who are they?

Dr. SEBRELL. That is what those positions would be. They would be people who would be engaged in the inspection and approval of the blood-collecting stations throughout the United States for the blood for the Armed Forces.

Dr. TOPPING. The Biologics Control Act provides that in order to hold a license from the Federal Government for the production of biologic material, each commercial laboratory or blood bank must be inspected once a year. Our staff is adequate to inspect the commercial houses, as we have always done, and the 34 Red Cross centers, but in the total blood bank program, in order to meet the needs in Korea, the independent blood banks, the hospital blood banks, have also been taken into the Red Cross program, and that means we must inspect each of those blood banks wherever they may be at least once a year, so the Army will accept that material, knowing it is sterile and safe.

There are 1,600 independent blood banks in the country. We do not intend to inspect them all. Certainly there are about 25 to 30 large independent blood banks that must be inspected once a year to be sure that the blood sent to Korea and used in the Red Cross program is safe.

Those three people are to be used in that inspection phase and in a little bit of research to go along with it in order to keep up the license from year to year.

Mr. SCHWABE. Do they spot check the blood bank?

Dr. TOPPING. Each inspection takes from 1 to 2 days. They go through the total procedure from the time the individual donates his blood through the whole procedure.

Mr. SCHWABE. That is a process inspection, then?

Dr. TOPPING. Yes; that is correct.

Mr. SCHWABE. They do not inspect the blood itself in the blood bank?

Dr. TOPPING. They do not inspect the blood itself.

Mr. SCHWABE. It is a process inspection.

Dr. TOPPING. It is a process inspection to be sure there are no loopholes and no chances where contamination may occur. And they make sure that the storage is proper and everything is as it should be in each of those centers.

Mr. HEDRICK. What becomes of the blood collected in the small communities?

Dr. TOPPING. Most of that is used in the small communities. They have a blood bank for the District of Columbia and there are several hospitals that exchange blood and keep it going for the local uses.

Mr. SCHWABE. The paper this morning or yesterday said some 37,000 collections were made here, I believe.

Dr. TOPPING. Usually the Red Cross in the District of Columbia will have a quota of blood that should be sent to the Fairfield Airbase on the west coast to go to Korea. The quota may be 2,500 units for the next 2 weeks.

Then the local blood banks that have a license help to supply that blood for shipment to Korea. According to the law of 1902 we have to inspect at least once a year every one of those licensed places, to be sure that the material sent is safe.

Mr. HEDRICK. Are they sending all of it to Korea in a powdered form now?

Dr. TOPPING. No, Dr. Hedrick.

The requirements in Korea have been met almost entirely with whole blood. Whole blood can be kept 21 days. It is a remarkable job. The blood has to be kept at not more than 40°. It means icing a couple of times en route. It means flying by plane into Japan and distribution from Japan into Korea.

The Navy actually sent a commander with one lot of blood and followed it from the time it was drawn until it was put in the vein of the man in Korea, and the report was a report of a remarkable job done on that with very little wastage.

Dr. SEBRELL. Just a few days ago they ran a collection out at our institute and they collected from a hundred of our staff members and shipped it to Korea that same day. That is the fresh whole blood. That must be used in 21 days. A lot of it goes bad before the 21 days.

Dr. TOPPING. As long as the front is fairly stabilized, they can use and prefer to use whole blood. When the front is very fluid, then they revert to using the dried plasma, because that can be carried with a little temporary hospital. They do not have to worry about the 21 days and the icing and all the other things.

There was a period when the front was not fluid when they were using plasma. When the front is stabilized, with evacuation hospitals and base hospitals, they like to use whole blood.

Mr. SCHWABE. A great advance has been made in the typing.

Dr. TOPPING. On the report the Red Cross gave us, they have done individual typings on every one of those transfusions, and they have had very, very little reactions, because they did such careful typing.

Mr. SCHWABE. Before there was some serious reactions, of course.

INCREASES FOR NEW INSTITUTE

Dr. SEBRELL. That takes care of the three positions. We will use 10 to staff the Institute of Neurological Diseases and Blindness. We have no staff for that institute.

ADDITIONAL LABORATORY AND TECHNICAL SERVICES

There will be 12 new positions for the supporting laboratory and technical services for all the institutes, including the new one of

neurology and blindness, and 56 new positions for the initial staff of the clinical center.

DESCRIPTION OF THE CLINICAL CENTER

The committee is familiar with what I mean by the clinical center.

Mr. FOGARTY. Give us a brief résumé of that.

Dr. SEBRELL. I mentioned in my opening statement that we had no clinical research facilities at Bethesda. There is under construction a large facility of approximately 500 beds capacity to remedy that defect. That is intended to be a research facility only, with the necessary laboratories to go with it.

Definitely now, construction is far enough along on that so that we now need to begin to get the staff together to prepare for staffing and we would like to be able to fill 56 positions as an initial staff to begin to prepare for the opening of that center.

Mr. FOGARTY. Which will be in July 1952?

Dr. SEBRELL. Yes, from then toward the end of 1952. That is the estimated date now. Dr. Masur is here.

Mr. FOGARTY. You are behind schedule.

Dr. SEBRELL. Dr. Masur has been responsible for that activity. It may be a little bit behind schedule. The last report was that it was almost on schedule.

Dr. MASUR. The construction of the main building is actually ahead of schedule now contrary to what we reported last year.

The delay comes in the construction of a power plant for which the contract has already been awarded.

Mr. FOGARTY. How many positions will be needed for a full-time staff?

Dr. SEBRELL. When the Clinical Center is fully operated?

Mr. FOGARTY. Yes.

Dr. SEBRELL. Probably in the neighborhood of 2,000. I should judge—just a gross approximation. I believe that will require that many staff members to operate that at full-scale operation.

Mr. FOGARTY. What do you estimate the cost will be eventually per year?

Dr. SEBRELL. The cost of that will possibly be—again as a rough estimate, which I hope you won't hold me to——

Mr. FOGARTY. No.

Dr. SEBRELL. Probably in the neighborhood of 10 to 12 million dollars.

Mr. FOGARTY. Will any of these new positions be used in the categorical institutes, such as heart, cancer, mental health?

Dr. SEBRELL. No. These will be positions necessary to get the Clinical Center operating as a center. They won't be people who are in the various categorical institutes doing research. We expect these to be for the clinical side.

Mr. SCHWABE. It is like hospitals are generally equipped; isn't that true?

Dr. SEBRELL. Yes. You can divide them into nurses, pharmacists, dietitians.

ADDITIONAL POSITIONS FOR NEW CLINICAL CENTER

Mr. FOGARTY. Will you give us a breakdown of those 56 positions?

Dr. SEBRELL. Yes; I can give an estimate to you here.

Mr. FOGARTY. Put it in the record.

Dr. SEBRELL. Yes; we will submit that for the record.

(The information requested is as follows:)

Key staff, clinical center

SUMMARY

	Positions	Net amount
Professional (commissioned officers)	19	$66,041
Other (civilian)	37	59,759
Subtotal	56	125,800
Regular pay in excess of 52-week base		1,000
Overtime		600
Total personal services		127,400

DETAIL

Planning of medical services:		
Professional (commissioned officers)	6	$44,607
Other (civilian)	8	27,525
Clean up, etc.: Other (civilian)	18	51,870
Personnel: Other (civilian)	5	25,400
Laundry: Other (civilian)	1	4,150
Dietetics:		
Professional (commissioned officers)	2	16,200
Other (civilian)	2	7,250
Housekeeping: Other (civilian)	1	5,000
Nursing:		
Professional (commissioned officers)	9	63,504
Other (civilian)	1	3,100
Pharmacy:		
Professional (commissioned officers)	2	16,200
Other (civilian)	1	3,100
Total permanent	56	267,906
Lapse	30	142,106
Net personal services	26	125,800

AGENCY ESTIMATE FOR 1952

Mr. FOGARTY. Do you have the figure that you asked the Bureau of the Budget for to get these two institutes on arthritis and rheumatism and blindness and neurology into operation?

Dr. TOPPING. The total request to the Bureau of the Budget?

Mr. FOGARTY. Give us the total first for the National Institutes of Health.

Dr. SEBRELL. The amount we asked for the arthritis institute?

Mr. FOGARTY. Give us the amount you asked the Bureau of the Budget for the operating expenses of NIH, including everything.

Dr. SEBRELL. Thirty-two million.

Mr. FOGARTY. You asked for $32,000,000?

Dr. SEBRELL. Yes, sir.

Mr. FOGARTY. And they allowed you $15,800,000?

Dr. SEBRELL. Yes, sir.

Mr. FOGARTY. What did you ask for rheumatism and arthritis?

Dr. SEBRELL. For arthritis we asked for $2,896,500. You see, that is for direct operations.

Mr. FOGARTY. What did they allow?

Dr. SEBRELL. They allowed $1,781,000.

That is not the entire arthritis. That is direct operations. There are other grants figures to go with that. Do you want the others?

Mr. FOGARTY. Yes. Neurological?

Dr. SEBRELL. Neurology and Blindness—$482,000 for direct operations.

Mr. FOGARTY. That is what you asked the Bureau of the Budget for?

Dr. SEBRELL. Yes; and they allowed $75,000.

Mr. FOGARTY. Those figures don't sound right. Are they right?

Dr. SEBRELL. Those are the figures I have here. This breakdown I have doesn't give you the total institute figure. The figure I am giving you is the direct operations; that is, research projects. To get the whole figure I would add to that——

Dr. TOPPING. In can give you some figures that would be what you want. In the Bureau of the Budget we had two sets of figures, as you know, because the ceiling was placed upon the Government agencies so we had a budget A and then the Bureau of the Budget permitted us also for their perusal to submit a B budget over and above the ceiling figure, especially for new legislation.

If you would like, I can give you the figures which are the combination of the A and B budgets, which were submitted to the Bureau of the Budget.

The research grants requested totaled $18,150,000. That was broken down as follows:

Regular NIH general grants, $5,550,000; ACTH, $3,600,000; arthritis, $5,000,000; neurology, $2,500,000; defense items, $1,500,000.

They have been removed from the budget and put in the civil defense budget.

That gave us a total of $18,150,000, but, since the $1,500,000 was removed, to be considered in the civil defense budget, it would leave a total of $17,000,000.

The fellowships submitted on the "A" and "B" budgets were as follows:

Regular fellowships, $550,000; fellowships for arthritis, $400,000; fellowships for neurology, $200,000.

That made a total of $1,150,000.

There were teaching grants for arthritis, $500,000; for neurology, $1,775,000.

Mr. FOGARTY. This is the table you are reading from?

Dr. TOPPING. That is correct.

Mr. FOGARTY. I think it would be best to put this table in the record.

(The table referred to is as follows:)

Operating expenses, National Institutes of Health

	1951 funds available	A and B budget request to the Bureau of the Budget	1952 President's budget	Increases recommended for 1952 over 1951 funds available
GRANTS				
Research projects:				
Regular	$5,201,000	$5,550,000	$7,500,000	−$1,000
ACTH	2,300,000	3,600,000		
Arthritis		5,000,000	750,000	750,000
Neurology		2,500,000	750,000	750,000
Defense		1,500,000		
Total	7,501,000	18,150,000	9,000,000	1,499,000
Research fellowships:				
Regular	542,000	550,000	550,000	8,000
Arthritis		400,000	50,000	50,000
Neurology		200,000	50,000	50,000
Total	542,000	1,150,000	650,000	108,000
Teaching of medical subjects:				
Arthritis		500,000		
Neurology		1,775,000		
Total		2,275,000		
Training stipends:				
Arthritis		180,000		
Neurology		120,000		
Total		300,000		
Special control projects:				
Arthritis		500,000		
Neurology		500,000		
Total		1,000,000		
Total grants	8,043,000	22,875,000	9,650,000	1,607,000
DIRECT OPERATIONS				
Research:				
National Institute of Arthritis and Metabolic Diseases	1,694,700	2,896,500	1,780,000	85,300
Microbiological Institute	2,221,800	2,950,000	2,311,000	89,200
National Institute of Neurological Diseases and Blindness		492,000	75,000	75,000
Laboratory and Technical Service	1,193,500	1,245,600	1,079,000	−114,500
Key staff, Clinical Center		275,000	140,000	140,000
Total research	5,110,000	7,859,100	5,385,000	275,000
Other direct operations:				
Review and approval of residence and training grants	523,900	836,500	555,000	31,100
Field studies (arthritis)		150,000		
Administration	237,000	279,400	210,000	−27,000
Total direct operations	5,870,900	9,125,000	6,150,000	279,1000
Total direct obligations	13,913,900	32,000,000	15,800,000	1,886,100

RESEARCH IN HIGH BLOOD PRESSURE

Mr. HEDRICK. What about research in high blood pressure?

Dr. SEBRELL. The research in high blood pressure is being carried out in the Heart Institute. There are some interesting findings in that field. I think one of the most recent things is the action of a deficiency of a substance called coline, which produces in experimental animals, if you give them a diet deficient in coline, and then put them on a normal diet, a permanent high blood pressure.

Another interesting thing in the field is the use of restricted diets of various types in treating high blood pressure. That was stirred up by Dr. Kempner down at Duke, especially with a rice diet, which attained quite a bit of publicity.

It seems to be primarily due to a severe restriction in salt. There may be some protein factors involved, but through severe salt restriction, you can favorably influence hypertension, apparently.

There is a great deal of work going on in the field and in a number of other places of the effect of ACTH on high blood pressure. It sometimes raises the blood pressure very high.

In the field of arteriosclerosis, which is related to hypertension, Dr. Goffman has found a large molecular combination that appears to be related to the production of arteriosclerosis. We are supporting a large project now for operations all over the country to determine how important this is in the produtcion of arteriosclerosis and what can be done to control it.

Those are the principal items of interest in that field.

Mr. SCHWABE. In this subject of cataract, referred to a while ago, we frequently find it accompanied by a deteriorated circulatory tract.

Dr. SEBRELL. That is true.

Mr. SCHWABE. What caused the deterioration, you do not know. When the circulatory tract gets rotten you usually have a development of cataract situation, which accompanies or immediately follows in the wake of the deterioration of the circulatory tract.

Dr. SEBRELL. That is one form of cataract, but there is a form of cataract that occurs in children, too.

Mr. SCHWABE. That is right; but this one I speak of is particularly found in adults.

Dr. SEBRELL. That is right.

Mr. SCHWABE. And there hasn't been much they could do about that so far. This cortisone hasn't had any effect there.

Dr. SEBRELL. We still do not know what causes them and therefore we don't know how to prevent them.

Mr. SCHWABE. Surgery has been employed, but apparently the deterioration of the circulatory tract takes the patient before long.

Dr. SEBRELL. All you can do is remove the lens. That means you have to wear very heavy glasses thereafter and can only see directly in front of you, which results in some impairment. There isn't any medical treatment. We hope if we knew more about them, we could find something.

METHOD USED IN SELECTING APPLICANTS FOR RESEARCH FELLOWSHIPS

Mr. BUSBEY. Doctor, what method do you use in selecting men for research fellowships? Do they make applications to you from all over the country, or do you have people spot certain likely men who would be good applicants for these fellowships?

Dr. SEBRELL. For research fellowships?

Mr. BUSBEY. Yes.

Dr. SEBRELL. They apply to us; and Dr. Price in charge of our fellowship program is here, and he would be glad to give you the details of the method.

Mr. BUSBEY. I am curious to know how these men would go about getting into the research laboratory.

Dr. SEBRELL. They file applications with us that set forth their training and the fields that they are interested in; where they want to work. Then they have a statement from the individual scientist with whom they want to work that he has a place for them and he is willing to take them. It is arranged to pay them a stipend while they do their research work with the individual of their choice.

Mr. BUSBEY. They do not necessarily come to the Institute?

Dr. SEBRELL. No; they are all over the country. They are at all the big universities.

Dr. PRICE. Yes, sir. I think the committee might be interested to know that we have detected quite a change in the character of the applicants to this program over the past 3 or 4 years in the sense that the quality of the men applying has steadily improved and at the present time, of all of the men who can meet our standards for appointment we are having to select about one out of four to award fellowships to and allowing the others to go, simply because we do not have any funds to take care of them.

Some 60 to 85 percent of the applicants at the present time are men who have the equivalent of college honors, which is rather interesting, because that is a very much better general qualification than was true of the applicants 3 or 4 years ago.

The reputation of the program and the opportunities it presents have been recognized more and more over the country.

With respect to where these men serve in their fellowships, we have only 7 percent of them working in Public Health Service installations. The remainder, the greater majority, are working in colleges and universities, research departments, and occasionally doing their work in a hospital or some other type of research institution not connected with the university.

RELATIONSHIP TO VARIOUS NATIONAL ASSOCIATIONS

Mr. BUSBEY. Doctor, what is your relationship to these various national organizations, such as the National Heart Association, the National Cancer Association, the National Cerebral Palsy Association, and various associations in these fields?

Dr. SEBRELL. We work very closely with them, Mr. Busbey. In many instances we have members of their organization appointed to our advisory councils. Very frequently some of our staff are actively on the boards and advisory committees of these various foundations. And we exchange in the closest way all of the information about what we are supporting and what they are supporting, where we are going in research and where they are going in research, so the programs will fit together and complement each other rather than run into any duplication or antagonism.

For example, Dr. Topping here works closely with the National Foundation for Infantile Paralysis. Dr. Van Slyke, of the Heart Institute, is an officer in the American Heart Association. The national secretary of the Diabetic Association is on one of our advisory councils. The American Cancer Society is very closely tied in with our National Cancer Institute.

We are watching that all the time. In these new Institutes of Arthritis and Neurology and Blindness we have been making contacts with the voluntary organizations in those fields. We worked very closely with the Multiple Sclerosis Society in connection with work in that field.

It has been very gratifying to see the closeness of cooperation that has taken place here, and the willingness of the voluntary agencies to work with us, and the way that the two things working together have served to stimulate and improve the whole field. It makes both of them—both the voluntary foundations and our people—recognize that cooperation makes them both better programs.

Dr. SCHEELE. Mr. Chairman, may I say something on or off the record in this connection?

It is a matter of great pride to us that Dr. Van Slyke, who is the head of the Heart Institute of the Public Health Service, has been selected to be the voluntary fund chairman of the Washington, D. C., Heart Association.

You may have seen his picture in the paper and some of the publicity.

That shows the way in which the Public Health Service and the voluntary health associations work together. That is typical of how we work with all the voluntary health associations.

LETTERS RECEIVED URGING ADEQUATE SUPPORT FOR TWO NEW INSTITUTES

Mr. FOGARTY. I would like to have these two letters put into the record at this point.

(The two letters, dated February 21, 1951, follow:)

FEBRUARY 21, 1951.

Hon. JOHN FOGARTY,
Chairman, Subcommittee on Labor and Federal Security Appropriations,
House of Representatives, Washington, D. C.

DEAR MR. FOGARTY: The undersigned have been giving substantial time during these past 2 years to the Arthritis and Rheumatism Foundation, which was formed to organize the work to find the cause and cure for arthritis and rheumatism, which afflict more than 7,000,000 of our people in the United States and cause disability and death to an extent greater than several other dreaded diseases combined. Last year Congress passed a law which created within the Public Health Service an Institute for Arthritis and Metabolic Diseases, which is well organized and has been able, we are told, to carry on up until now on a modest scale with some funds which were transferred from other sources, because the bill creating the Institute carried with it no appropriation. The appropriation itself, provided for by subsequent bill, was lost in the last days of the last session.

Hearings are now about to start, we are told, with respect to appropriation for this particular institute within the Public Health Service. Our knowledge of what has been going on recently in this field of arthritis and rheumatism leads us to believe that immense results in terms of effectiveness and happiness of the people will result from the research and aid which will be made possible by an appropriation.

It is our expressed hope that your committee will find it proper to give the needed funds to carry on this most important work.

Sincerely,

LUCIUS D. CLAY.
SIDNEY J. WEINBERG.

EXECUTIVE OFFICES OF THE PRESIDENT,
NATIONAL SECURITY RESOURCES BOARD,
Washington 25, D. C., February 21, 1951.

Hon. JOHN FOGARTY,
Chairman, Subcommittee on Labor and Federal Security Appropriations,
House of Representatives, Washington, D. C.

DEAR MR. FOGARTY: It has come to my attention that you are to hold hearings on the question of appropriations for the Institute for Arthritis within the Public Health Service.

I have followed with interest the splendid work being done in the field of arthritis and some of the fine results in alleviating this affliction. Surely anything that can be done to continue this work would be of real benefit to the American people.

I hope that your committee will find it possible to make necessary funds available for this work.

Sincerely,

STUART SYMINGTON.

Mr. FOGARTY. Do you have any further statement you would like to make, Doctor?

Dr. SEBRELL. No.

Mr. FOGARTY. Thank you, Doctor.

WEDNESDAY, FEBRUARY 28, 1951.

HOSPITALS AND MEDICAL CARE

WITNESSES

DR. G. HALSEY HUNT, CHIEF, DIVISION OF HOSPITALS
DR. VICTOR H. VOGEL, MEDICAL OFFICER IN CHARGE OF UNITED STATES PUBLIC HEALTH SERVICE HOSPITAL, LEXINGTON, KY.
DR. JACK MASUR, CHIEF, BUREAU OF MEDICAL SERVICES
DR. PALMER DEARING, DEPUTY SURGEON GENERAL

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
Appropriation or estimate	$25,200,000	$29,000,000	$30,200,000
Unobligated balance, estimated savings	−33,893		
Savings under sec. 1214		−26,000	
Obligations incurred	25,166,107	28,974,000	30,200,000
Comparative transfer from—			
"Mental health activities, Public Health Service"	3,058,022		
"Employee health service programs, Public Health Service"	154,435	50,000	
Comparative transfer to—			
"Dental health activities, Public Health Service"	−17,323		
"Salaries, Office of Administrator, Federal Security Agency"	−13,052		
Total direct obligations	28,348,189	29,024,000	30,200,000
REIMBURSABLE OBLIGATIONS			
Reimbursements for services performed	5,006,495	6,497,650	6,156,228
Payments received from non-Federal sources	515,917	532,686	594,292
Comparative transfer from—			
"Mental health activities, Public Health Service"	1,505,007		
"Employee health service programs, Public Health Service"	308,830	242,301	
Total reimbursable obligations	7,336,249	7,272,637	6,750,520
Total obligations	35,684,438	36,296,637	36,950,520

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
1. Operation of hospitals	$23,983,573	$24,545,183	$25,490,818
2. Operation of out-patient clinics and offices	2,987,380	3,122,433	3,288,955
3. Operation of health units	2,034	7,925	8,477
4. Coast Guard, medical services	614,159	674,401	800,750
5. Administration	761,043	674,058	611,000
Total direct obligations	28,348,189	29,024,000	30,200,000
REIMBURSABLE OBLIGATIONS			
1. Operation of hospitals	6,883,291	6,875,519	6,316,550
3. Operation of health units	308,830	242,301	279,470
6. Personnel detailed to other agencies	144,128	154,817	154,500
Total reimbursable obligations	7,336,249	7,272,637	6,750,520
Total obligations	35,684,438	36,296,637	36,950,520

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	8,046	7,929	7,627
Full-time equivalent of all other positions	145	144	144
Average number of all employees	7,853	7,821	7,539
Personal service obligations:			
Permanent positions	$26,100,268	$27,039,059	$26,994,240
Part-time and temporary positions	951,198	929,890	895,096
Regular pay in excess of 52-week base	75,335	55,109	129,568
Payment above basic rates	848,267	880,344	874,928
Total personal service obligations	27,975,068	28,904,402	28,893,832
Deduct charges for quarters and subsistence	1,016,299	986,900	968,419
Net personal service obligations	26,958,769	27,917,502	27,925,413
DIRECT OBLIGATIONS			
01 Personal services	21,314,759	22,142,530	22,625,358
02 Travel	204,825	211,260	214,285
03 Transportation of things	167,685	151,152	162,522
04 Communication services	84,098	90,017	90,825
05 Rents and utility services	458,369	434,552	448,603
06 Printing and reproduction	57,826	56,425	57,093
07 Other contractual services	852,532	918,872	1,013,479
Services performed by other agencies	535,494	357,300	390,100
08 Supplies and materials	4,132,002	4,194,511	4,528,822
09 Equipment	520,283	445,831	642,613
11 Grants, subsidies, and contributions	16,840	16,900	17,000
13 Refunds, awards, and indemnities	3,476		
15 Taxes and assessments		4,650	9,300
Total direct obligations	28,348,189	29,024,000	30,200,000
REIMBURSABLE OBLIGATIONS			
01 Personal services	5,644,010	5,774,972	5,300,055
02 Travel	51,156	47,740	40,258
03 Transportation of things	45,511	38,088	33,696
04 Communication services	19,084	20,669	19,261
05 Rents and utility services	130,590	124,148	106,697
06 Printing and reproduction	12,866	12,575	11,907
07 Other contractual services	96,093	97,517	98,334
08 Supplies and materials	1,201,744	1,153,174	1,023,237
09 Equipment	135,195	3,754	117,075
Total reimbursable obligations	7,336,249	7,272,637	6,750,520
Total obligations	35,684,438	36,296,637	36,950,520

Mr. FOGARTY. Dr. Hunt, do you have a statement for the committee?

Dr. HUNT. I have no formal statement, Mr. Chairman. With your permission, I would like to review our activities briefly.

Mr. FOGARTY. Go right ahead.

GENERAL STATEMENT

Dr. HUNT. The Public Health Service has been charged by the Congress with the responsibility for the health and medical care of several important groups of our citizens.

BENEFICIARY GROUPS

The origins of the Public Health Service go back to 1798, when we first were charged with responsibility for the care of merchant seamen. That has continued to date, and seamen still constitute our largest single patient group.

During the intervening years, other beneficiary groups have been added. We act both in peacetime and in wartime as the medical arm of the Coast Guard. Even when they become part of the Navy during time of war, we retain primary responsibility for their medical care.

With the defense effort shifting into high gear, the Coast Guard is increasing in size, and shipping is increasing in amount. We can definitely look forward to a considerable degree of increased requirements for these two groups. A measure of what we may anticipate is that between 1940 and 1945 admissions to our general hospitals rose 70 percent.

We have other beneficiary groups, of course. It is always an important function, but it is doubly so in time of emergency, to take care of and restore to activity as quickly as possible Federal employees who are injured in line of duty. We work very closely with the Bureau of Employees' Compensation, and we take care of a great many of their patients in our hospitals. That, also, in these times of emergency is an activity which may be expected to increase rather markedly.

EMPLOYEE-HEALTH PROGRAMS

During the current fiscal year we have also had the responsibility for the Federal employee-health program, which formerly was operated under a separate division. As you know, that was curtailed rather sharply this year and because of that fact was transferred to the Division of Hospitals for administration. That activity now comprises three principal functions. We consult with other Government agencies upon the operation of health programs which they have for their employees. We consult with them and advise them on the establishment of new health programs and, upon request and on a reimbursable basis, in certain instances, we operate the programs for them. We supply the doctors and the nurses to do the work and, in turn, are reimbursed by the agency concerned.

Besides these groups who are eligible for our care because of the work they do, there are two patient groups who are eligible because of the type of illness they have. Those are the patients with leprosy or Hansen's disease, and patients who are victims of narcotic-drug

addiction. Both of these types offer very special problems for treatment, and in times past the Congress has decided that hospitals should be set up to take care of these special problems.

NARCOTIC HOSPITALS AND DRUG ADDICTION AND TREATMENT

Mr. DENTON. Let me ask you about those narcotics. They can only go there by order of the Federal court in criminal cases?

Dr. HUNT. In addition to that, there is a provision in the law that provides for admission of voluntary patients, any person in the country who is addicted to one of the specified drugs. And it has to be one of the narcotic drugs; it does not include the barbiturates and addiction to alcohol.

Mr. DENTON. I tried to get a man in one of the hospitals, and he was in a state where you had to hospitalize him. They said there was no way they could keep him there, and if he came and wanted to leave they said they couldn't go ahead with the treatment.

Dr. HUNT. That has been a very serious problem, Mr. Denton. It is for that reason that we would be in favor of a Federal law which would permit us to commit patients as patients are committed to mental hospitals and to hold them on that basis.

As it is, the only possible legal mechanism that we have for holding patients who are volunteers and who wish to leave the hospital is a Kentucky State law which provides that the habitual use of narcotic drugs is a misdemeanor. A certain number of patients are sentenced by the Kentucky courts to a year in jail on the basis of their narcotic addiction, and the sentence is suspended upon condition that the patient enter our hospital for treatment. That is a roundabout way of handling the situation; and we would much prefer to treat these patients as patients, and commit them as mental patients are committed, rather than to have them go through this procedure which does fasten a criminal stigma upon them, sometimes unjustly.

Mr. DENTON. I expect I talked to you or someone else about this case. I got the man over to Kentucky, but he wouldn't go into the hospital after he got there.

Dr. HUNT. That is the problem. That whole problem of drug addiction is increasing rapidly, as I am sure you are familiar with the situation from what has appeared in the public press. We are feeling the effect of it, and now it applies not only to the adult patients but it also has effected a terrific increase in the number of young people under 21 who are coming in with drug addiction.

ADMISSIONS TO NARCOTIC HOSPITALS

We have the figures from our hospitals—the Lexington and Fort Worth hospitals—and I thought it would be worth showing you this graphic representation. The Lexington hospital was opened in 1935. The Fort Worth hospital was opened in 1938. This has been the line of admissions during the intervening 16 years and 13 years, respectively. There was a slight drop during the war years. Then there was a marked rise after the war. The number of admissions last fiscal year was 4,500. The anticipated number this year is 4,800, and for fiscal 1952 it is over 5,600.

That in itself is striking enough, but this side chart shows what has happened with the youngsters under 21. In 1946 there were 26 admitted. In the last quarter of the calendar year 1950, patients were admitted at a rate of 700 a year. That is what the projection of the estimates for 1951 and 1952 is based on. We obviously are projecting there, but all the evidence is that there will be that many, if not more.

Dr. Vogel, who is medical officer in charge of the hospital at Lexington, is here today and, if you wish to question him later, I am sure he will be happy to answer your questions. He can give you more detail, of course, than I can. We do have figures from the hospital as of yesterday that right now there are 162 boys under 21 in the hospital and 18 girls under 21. It really is a terrific problem.

HANSEN'S DISEASE

The other group who are our patients because of their illness is the patients with Hansen's disease. That poses a very special problem because, in addition to its being a serious disease, it carries a social stigma, and many of our patients have gone into Carville Leprosarium under false names. That is diminishing, but quite a number still are not known by their right names, because they do not want that word to go back to their families back home.

You can see what kind of a problem that poses. You probably met Stanley Stein when you were down there the other week, Mr. McGrath. That is not his right name. I do not know his right name. He came in under that false name and he maintains it. That is simply an illustration of that aspect of the problem.

Mr. SCHWABE. You do not make any effort to identify them?

Dr. HUNT. I think that now the hospital is getting that information, certainly from most of the patients. We have not made any particular effort to identify them because of the problems that have been involved. Recently people in other parts of the Service, notably at the Communicable Disease Center, have been working on epidemiology, and we have tried to get the actual names and have had case workers go back to the town where the patient comes from. That is awfully tricky business, because in many instances people who are patients have complained they did not want that done because we were giving away their secret.

We know that these patients came from X town, and that some of the families or friends may also have the disease. We would like to get back to them and either make sure that they do not, or if they do, get them under treatment. But it is a very ticklish problem from the social point of view.

That introduces a great many problems, as I am sure Judge McGrath found out, in the operation of the hospital there.

Mr. SCHWABE. From your operation experience, it seems you should be able to make suggestions as to the remedies for these difficulties you are encountering.

Dr. HUNT. We are working on it. The most hopeful thing that has happened in that respect is that now, for the first time, we have a treatment which, while it is not specific, does offer some hope. That is only within the last 10 years. Dr. Guy Faget, who was medical officer in charge at Carville about 10 years ago, started to use the sulfone

drugs, which were developed by some of the drug houses. They are related to the sulpha drugs, although not too closely. They are different chemically. They had been developed as a possible treatment for tuberculosis. He, knowing that the tubercle bacillus and the bacillus of Hansen's disease were similar in appearance, thought it was worth while to take a try. At that time no one had used these drugs for leprosy before.

It has been found during the past 10 years that they have a beneficial effect on the disease. They are not a specific control of the disease, but certainly, since the sulfone drugs have been used, the number of complications has diminished sharply. Blindness, absorption of the bones of the hands and feet, and so on, and the other complications have diminished. The number of discharged patients has increased sharply.

We have to use care in speaking of it because it certainly is not specific treatment, but, for the first time, the patients have something to look forward to and they are, therefore, in increasing numbers leaving the hospital and going back to useful occupation.

The problem there, of course, is that even though they are discharged as arrested, people sometimes are pretty cruel about not wanting to have anything to do with them.

Mr. SCHWABE. There is good reason for that; isn't there?

Dr. HUNT. I don't blame anyone who doesn't want to have much to do with a person with active Hansen's disease; no, sir. Those who are arrested cases—they are not discharged until they have had 12 consecutive monthly examinations which are negative—those people are really pretty safe.

Mr. SCHWABE. But the public doesn't know that as well as you do.

Dr. HUNT. That is right. There is an educational job there which is certainly complicated by the fact that it is a most distressing disease when you do get it.

Mr. SCHWABE. How many patients a year do you treat there?

Dr. HUNT. We have a patient population of about 400.

Mr. SCHWABE. What is the average length of treatment?

Dr. HUNT. Of those admitted recently, somewhere in the neighborhood of 3 years, I would say. There were 95 patients admitted during the past fiscal year. On a straight relationship basis, that would mean an average of 4 years of treatment instead of 3, as I just quoted.

The reason we do not have too good figures and statistics on that is that it is only within the last few years that we have been getting the discharges on the basis of sulfone treatment, so that patients who are being discharged now, those that have been discharged in the last 2 or 3 years, are the first really who have had sulfone treatment all the way through. Before that time there was a large number, and there are still quite a number, who were in the hospital before the sulfones were available, and they come along and some of them are being discharged last year, this year, and next year. The fact that they have been in for 20 years affects our statistics.

But I think we can say that at the present time a person going in with the disease in not too advanced a stage would probably be under treatment for somewhere between 3 and 5 years. I am sorry I cannot be more specific.

Mr. SCHWABE. And is the number of leprosy cases or Hansen's disease increasing or decreasing as far as you are able to determine?

Dr. HUNT. Probably decreasing.

Mr. SCHWABE. I am talking about as far as this country is concerned.

Dr. HUNT. Probably decreasing as far as one can tell.

Mr. SCHWABE. Impossible to ascertain definitely?

Dr. HUNT. Absolutely; because of the secrecy with which people surround it.

Mr. SCHWABE. Are there any institutions treating people with that disease?

Dr. HUNT. No public institutions.

Mr. SCHWABE. Are there private institutions which take these patients?

Dr. HUNT. I don't know of any. There probably are some, because in New York and in Massachusetts the disease is not notifiable and not quarantinable. So it is not segregated. People with Hansen's disease can stay in those States and a certain number of them are, I am sure, under treatment.

Mr. SCHWABE. Where do you get these patients; references by physicians?

Dr. HUNT. They are normally sent us by State health departments.

Mr. SCHWABE. The earlier you get them, the better chance you have to arrest the progress of the disease?

Dr. HUNT. Yes, sir.

Mr. SCHWABE. What is the result of poor treatment or no treatment? Death, isn't it?

Dr. HUNT. Leprosy itself is not a killing disease. Patients go for a great many years. The complications of the disease that are most troublesome are, first, blindness and then absorption of the bones of the hands and feet.

Mr. SCHWABE. Extremities?

Dr. HUNT. Both extremities. So that claw hands and feet develop, and the people are almost unable to do anything for themselves.

Mr. SCHWABE. Without sloughing off? That is, internal absorbtion?

Dr. HUNT. It is an internal absorption. It is a shrinkage due to the absorption of the bone and the surrounding tissues.

Mr. SCHWABE. That continues as the disease progresses?

Dr. HUNT. That continues up to a point. There are a certain number of persons who get to the burned-out stage. The disease becomes quiescent and does not progress, and they get along in that crippled condition for the rest of their lives.

Mr. SCHWABE. Until some other complications develop?

Dr. HUNT. Yes.

Mr. DENTON. What kind of disease is it?

Dr. HUNT. It is a systemic disease probably caused by an organism known as Hansen's bacillus, which looks very much like the tubercle bacillus. We do not know the mode of transmission. We do not know how it is transmitted from one person to another. All evidence is that it is a communicable disease, that it develops in one person on the basis of infection from another person. Whether it is

droplet infection, as in pneumonia—inhalation of droplets—or carried by insect vectors, no one has been able to determine.

It is not easily communicable. That, of course, is the reason why the patients feel that they should have more liberties than we sometimes feel we ought to give them. It is perfectly true that it is hard to transmit the disease from one person to another.

The disease has two forms, one which affects the skin and subcutaneous tissues, in which nodules develop, and thickening of the skin. It frequently attacks the face. You get leonine expressions, that very heavy development of the features. The eyebrows are likely to fall out. Various other skin manifestations show up.

Then the second form is the form which attacks nerves. Frequently, the first symptom of the disease is an anesthetic area. A person may find that he has burned himself on the arm severely, but he never felt any pain. Among children, it is not uncommon that the children find that they have anesthetic areas and amuse their school friends by showing off and pricking themselves with pins and showing that it doesn't hurt. The nerve damage is what leads to the absorption of bone.

That briefly is the disease.

Mr. DENTON. It is such a rare disease, would the ordinary practitioners have difficulty in diagnosing it?

Dr. HUNT. They do indeed. It is seen by only a few medical students in their medical school course, and in their internship. It is frequently mistaken for something else. It is frequently missed for months. It is not a dramatic disease at the beginning. It is only in the late stages that these rather extreme manifestations show up. In the early stages it may go on for years with just a little anesthetic patch on the forearm or a few red spots on the skin. During that period, unless the doctor has been specially trained in dermatology, it can be easily missed.

Mr. DENTON. If they catch it in time, can they do more with it than if it goes on?

Dr. HUNT. We think so. All the evidence is that the earlier you get it, the better the treatment is. We have the sulphone drugs now to work with.

Mr. FOGARTY. Did you finish your statement?

Dr. HUNT. I would like to make one or two additional comments, Mr. Chairman, if I may.

Mr. SCHWABE. Is the diagnosis of this disease by the average physician sometimes confused with scrofula?

Dr. HUNT. It is confused with a variety of things.

Mr. SCHWABE. And sometimes with tuberculosis?

Dr. HUNT. More commonly with tuberculosis.

Mr. SCHWABE. Other times with Hodgkin's disease?

Dr. HUNT. I don't recall any confusion with Hodgkin's disease in my own experience. It might be. It is a confusing diagnosis to make.

In addition to these activities that I have described, we help out the Veterans' Administration by taking care of their patients in areas where their own facilities are insufficient. That, of course, is becoming less and less of a problem from year to year, as their building program goes along, but we still have considerable calls upon us for that purpose.

INCREASES FOR 1952

I should like to make one or two statements about the budget itself. This budget before you has been prepared in the light of the present situation and will provide for a slightly lower level of operation than was contemplated in the appropriation for the present fiscal year. There is an increase of about $650,000 in total obligations, which is made up of several factors. About $500,000 of that is to provide for automatic pay increases for people now on duty, according to the acts of Congress, which are mandatory upon us. There is $75,000 for the extra day in 1952. There is an increase of about $135,000 in outpatient clinic activities and of about $106,000 for the Coast Guard.

Offsetting those, to some extent, are decreases in the operations of hospitals of about $117,000, and in administration of about $75,000. Those decreases and the relatively small increases are made possible by a decrease in employment of about 300 people. The increase amounts to less than 1½ percent of the total appropriation base.

REDUCTION IN REIMBURSEMENTS AND INCREASE IN DIRECT APPROPRIATION

In addition to that $650,000, there is an increase in direct appropriations of about $520,000, which is due to the fact that we are contemplating reducing the number of reimbursable patients at Fort Worth Hospital to make room for an equivalent number of addict patients because of the increase we spoke of a few minutes ago. That doesn't increase the total obligation at all, but it does mean that this amount of money, which formerly came to us in the form of reimbursements, would now have to be furnished as direct appropriations.

Those two items—a $650,000 increase in obligations and a $520,000 increase in direct appropriations because of that patient shift—add to the total increase over the 1952 base of $1,176,000.

NEED FOR ADEQUATE MEDICAL CARE IN HOSPITALS

I would like say one last word about what we are aiming at in general in this program. There is no objective measurement for the quality of medical care. We try, however, to provide the kind of medical care in our hospitals that we would be willing to accept ourselves, that we would be willing to send our families to.

At the same time we feel that just on a dollar-and-cents basis, bargain-basement medical care is rarely the cheapest in the long run. We do have patients who have to get back to work, both for their own rehabilitation and for the good of society, and, particularly in these times, we think that good medical care, which will get the seaman or the coast guardsman back to work in, say 3 weeks, whereas poorer medical care might take 6 weeks, is definitely advantageous, just from the money viewpoint.

In addition to that, we feel that we have a responsibility to provide this service at a reasonable cost to the national economy. I think that in that we have succeeded, according to these figures that I have here.

PATIENT-DAY COSTS

I have here a chart which shows the figures of the American Hospital Association relating to the year 1949. The general voluntary hospitals of the country operated at a patient-day cost of $14.33. Our general marine hospitals operated at a cost of $11.57. That figure includes the medical staff and dental staff, which the general voluntary hospital figure does not include, and that increases the disparity.

In the fiscal year 1952 the estimated per diem cost under the appropriation we are requesting would be $12.36, up less than $1 since 1949 in spite of rising costs of all kinds.

I should be glad to answer any questions, Mr. Chairman.

REASONS FOR CURTAILMENT OF SOME FACILITIES

Mr. FOGARTY. Thank you, Doctor.

Doctor, we have had several inquiries about the curtailment of some of your marine hospitals throughout the country, such as the one at Ellis Island and the one at New Orleans. Those were the two I heard about. Also, there was some curtailment of the facilities on the inland waterways.

Will you give us some specific information regarding Ellis Island and New Orleans as to the reasons why these services have been curtailed and the number of employees dropped and the savings you have made in this fiscal year.

Dr. HUNT. Yes, sir.

Mr. FOGARTY. Take Ellis Island first and New Orleans second.

Dr. HUNT. The situation came about because several adverse happenings developed at the same time during the second quarter of the present fiscal year. The amount of money which we had looked forward to receiving for reimbursable patient care, largely from the Veterans' Administration, ran somewhat short the first quarter of the year.

During the second quarter of the year we tried to make adjustments, so we would use the veteran bed allocations in our hospitals more fully, but during the second quarter we found that the Veterans' Administration was having their problems also, and that they were not going to be able to maintain the full number of patients which both we and they had anticipated originally.

As far as we could tell in December, that would lead to a shortage of about $350,000 for the year. There were two other factors besides that. In the first place, the Coast Guard has increased since the 1st of July, and we have increased demands from the Coast Guard, both for care in our own hospitals and more especially for detail of officers to Coast Guard activities. That produced an additional demand upon our resources of about $80,000.

The third thing that happened was that price rises since the first of the year, in food particularly, but also in equipment and supplies generally, required about $161,000 more than was budgeted.

The net effect of those three happenings was that in December we were faced with the necessity of cutting back $500,000 in our operations for the year, approximately $500,000.

Our expenditures are 75 percent for personal services. The only way we could save $500,000, therefore, was to reduce our employment by an amount that would save that much money. As a matter of fact, we did cut back our equipment and supply items to the hospitals by something over $100,000, but that left a large sum to be made up by reduction in personal services.

CLOSING OF ELLIS ISLAND HOSPITAL

As far as Ellis Island is concerned, there were two or three major considerations. In the first place, we have, as a matter of long-range planning in the past, hoped that some day we would be able to get out of that hospital. It is isolated, on an island. It requires ferry service, which is at present maintained by the Immigration and Naturalization Service, but which does not run 24 hours a day. The buildings are old. They are multiple, not a single building. It is a series of interconnected two- and three-story buildings. They are not adequate for modern hospital operation, even if they were completely renovated.

We had, however, no idea of closing the Ellis Island Hospital this year until this fund situation developed. Then it appeared that we had only two choices. We could cut back all of the hospitals by something approaching 10 percent of their employees, or we could close Ellis Island and cut back the other hospitals approximately 5 percent.

We studied the situation. The Surgeon General appointed a board, which was made up of some of our own people and some representatives from the Immigration and Naturalization Service, and they determined, first, that we could provide proper service to the Immigration and Naturalization Service elsewhere and, second, more important, that we could take care of all of the patients in the New York area in our other two hospitals there.

Our largest general hospital is at Staten Island. That could absorb about 200 patients from Ellis Island. And the Manhattan Beach Hospital, which is a tuberculosis hospital for that area, could absorb the forty-odd tuberculosis patients who had been hospitalized at Ellis Island.

In both cases this crowds the hospitals a little more than we would like. At the present time it is not serious. If there is a large demand for increased hospitalization in the New York area, within the next year or so, we may be pinched. We can, however, still take in more patients at both of those hospitals than we have now.

As far as patient care is concerned, we will be able to do a better job in the two hospitals than we have formerly been able to do in three.

As far as the New Orleans Hospital is concerned, they simply took their share of the over-all cut.

Mr. FOGARTY. Five percent?

Dr. HUNT. It was approximately 5 percent. I can give you the exact figure if you wish, but it was in that range for all of the hospitals aside from Ellis Island.

Mr. MCGRATH. For the sake of continuity, can we take this Ellis Island proposition up at this time, before we go on to something else?

Mr. FOGARTY. That is all right.

Mr. McGRATH. What doctor is in charge of the Ellis Island Hospital?

Dr. HUNT. Dr. Gordon Abbott.

Mr. McGRATH. He has some rank?

Dr. HUNT. He is a medical director, which corresponds to colonel in the Army.

Mr. McGRATH. You gave us three happenings which prompted your closing of the Ellis Island Hospital.

Dr. HUNT. Yes.

Mr. McGRATH. Those three reasons did not include any statement that this committee cut the appropriation for Ellis Island; is that correct?

Dr. HUNT. The Congress appropriated $278,000 less than our budget request.

Mr. McGRATH. But that applied all over the country.

Dr. HUNT. Country-wide. It is not broken down by each hospital. I do not think at any point, either to the Bureau of the Budget or here, have we submitted a budget for that hospital. We do not build our budget that way.

Mr. McGRATH. So the three happenings you have stated were the real causes for your decision to close Ellis Island; is that correct?

Dr. HUNT. Yes, sir. We have a shortage that had to be made up and this appeared to be the least harmful way of making it up.

Mr. McGRATH. I am not quarreling with your decision. You may be completely right about it. I am just trying to get your reasons. You have given us your complete reasons and there are no others that prompted your decision; is that correct?

Dr. HUNT. There are no others.

Mr. McGRATH. Are you familiar with the fact that your director of medicine there called the employees together and told them that it was Congress, that it was this subcommittee, that cut the appropriations for the Ellis Island hospital, and, as a result of our action here, you were compelled to close that institution?

Dr. HUNT. I have not heard that previously; no, sir.

Mr. McGRATH. Didn't a committee go to see Mr. Ewing? Weren't you at that conference?

Dr. HUNT. I was, indeed.

Mr. McGRATH. Didn't representatives of the nurses and the employees make that statement?

Dr. HUNT. I don't think they put it quite that way.

Mr. McGRATH. What way did they put it?

Dr. HUNT. I do not recall that they said anything about congressional action. I may be wrong.

Mr. McGRATH. Didn't they tell you that the medical director told them that their remedy was in Washington because Congress had cut the appropriation, referring specifically to this subcommittee; and didn't they tell you, as a result of that, they came here in Washington and finally made the appointment with Mr. Ewing, only after the American Federation of Labor entered into the picture and asked that Mr. Ewing see the committee?

Dr. HUNT. My recollection is that the first part of that statement is correct, that they were told that the only remedy lay in Wash-

ington, but I do not recall, sir, that they had been told that the closure resulted from the action of this subcommittee or of the Congress.

Mr. McGrath. These people came here and I think the chairman has a telegram from Congressman Murphy who also saw this delegation and who also in his telegram refers to a cut in appropriation.

My point is this, sir: I am not concerned about your closing it. Your judgment might be absolutely correct, because I know it is an antiquated building. You have another one in Hudson Street that is probably as filthy a hospital, because it is such an old building.

Dr. Hunt. We are not happy about it.

Mr. McGrath. No one would complain if you closed those institutions except the people who want the employment. In the over-all picture we must recognize you have problems.

Some of your subordinates charged the men around this table—and all of them are interested in Public Health Service—and said that Congress made the cut. Your agency is being unfair to this committee.

Dr. Dearing. I was also at the conference with Mr. Ewing.

Mr. McGrath. That was the conference after he had refused to see the people.

Dr. Dearing. From my knowledge, he did not refuse to see them. Congressman Murphy did ask if we would see them, but I know of no previous rejection of the request.

Mr. McGrath. Then you don't know whether he did or did not.

Dr. Dearing. I do not.

As I understood it from the group, the position was that they were told that they would have to go to Congress to get the funds, but were not told that the Congress had cut the funds; that the other circumstances described by Dr. Hunt had resulted in a shortage, and our request for authorization to present a deficiency request to the Congress had been denied by the Bureau of the Budget.

That is the position that we and Mr. Ewing explained to the representatives, but not that it resulted from a cut at the beginning. We did then have to say that, since we were part of the administrative branch of the Government, we could not go beyond the President's decision not to request additional funds.

Mr. McGrath. You have weasel-worded beautifully. I haven't said a thing about it. It was the doctor in charge there who laid the responsibility down to this committee here, not the Bureau of the Budget or Mr. Ewing.

Dr. Hunt. We have heard—this is not impugning any individual—a great many rumors as to who had said what.

Mr. McGrath. Did you make any investigation?

Dr. Hunt. They are at the level where you cannot really make any investigation.

Mr. McGrath. Did you talk to your employees?

Dr. Hunt. Yes, we have done that.

Mr. McGrath. Who made the investigation and when, and who was your investigator and whom did he talk to?

Dr. Hunt. There has been no formal investigation. All I am saying is that I have been quoted as saying things which I know I never said.

Mr. McGrath. I never heard you quoted at all. It was the man in charge. You called him a colonel.

Dr. HUNT. That is his equivalent Army rank; yes, sir.

All I would like to say is that there has been a great deal of talk from individual to individual and a certain amount of distortion as words have passed along, and, as I say, the reason I can be so sure of that is that I have been quoted as saying things which I know I never said.

Mr. MCGRATH. Don't you think in view of this, in fairness to the men at this table and in fairness to the Congress, you should make an investigation and advise the 300 or 400 employees that Members of Congress had no part in this?

It doesn't affect me personally, because I am miles away from it. I haven't an employee in my own district that I know of. I am concerned about the attacks being made constantly upon Members of the Congress by bureaucrats who constantly want to pass the buck from their own decisions.

Dr. MASUR. May I have the opportunity to interview Dr. Abbott to see whether he made such statements. Do I have your permission?

Mr. MCGRATH. I don't think you need any permission from me for that.

Dr. MASUR. We shall do so.

Dr. HUNT. Certainly from our office we have never implied anything of that sort. I am very much surprised to hear that it came out of New York, because I have never heard that previously.

Mr. MCGRATH. Will you see a delegation of these nurses and people?

Dr. HUNT. I shall be glad to.

Mr. MCGRATH. They will be very happy to see you.

Dr. HUNT. I have seen one delegation in Mr. Ewing's office. I have talked to another delegation in my own office. I have visited New York and spoken at an open meeting at which questions were raised.

Mr. MCGRATH. Remember, I am not finding fault with your decision. You may or may not be absolutely right on it. I am concerned with the men who spent hours on this work and have a "colonel" in New York say that it was Congress who put these people out of their jobs. It isn't fair.

Dr. HUNT. I quite agree with you.

PATIENT LOAD

Mr. FOGARTY. Dr. Hunt, I will ask at this time that this table, "Average daily patient load and outpatient visits," on page 50, be inserted in the record at this point.

(The above-mentioned table follows:)

Average daily patient load and out-patient visits

	1951 estimate	1952 estimate
General hospitals	4,425	4,401
Tuberculosis hospitals	485	485
Leprosarium	390	390
Neuropsychiatric hospitals	2,260	2,210
Total	7,560	7,486
Out-patient visits	556,500	577,400

These patient days represent services to the following classes of beneficiaries:

Nonreimbursable: American seamen, Coast Guard personnel, Bureau of Employees' Compensation cases, patients at the National Leprosarium, narcotic addicts, and other beneficiaries authorized by law.

Reimbursable: Veterans, foreign seamen, Army, Navy, and Marine Corps personnel, immigrants, Coast Guard and Public Health Service dependents, and other reimbursable patients.

With a reduction in patient load of about 1 percent, the personal services requirements other than mandatory increases, such as within-grade advancements, longevity payments, etc., will be reduced 294 positions or 4 percent.

Mr. FOGARTY. It shows another slight decrease in patient load from 7,560 to 7,486, from 1951 to 1952. In what categories does that decrease come?

Dr. HUNT. It affects all of the beneficiary groups, except the addict group, which goes up over 200.

Mr. FOGARTY. The whole difference is 74.

Dr. HUNT. There is a material drop in the veteran group of almost 400 patients. Those are 300 patients in the Fort Worth Hospital and 97 patients in the general hospitals.

REIMBURSEMENTS

Mr. FOGARTY. What did you estimate your reimbursements would be for this fiscal year in 1951?

Dr. HUNT. Those were estimated for fiscal 1951 to be $7,272,637.

Mr. FOGARTY. How much are you going to receive?

Dr. HUNT. $7,009,301.

Mr. FOGARTY. That is about $263,000 less than you estimated?

Dr. HUNT. Yes, sir.

Mr. FOGARTY. That $263,000 is part of that deficit you are running at the present time, nearly $500,000?

Dr. HUNT. Yes.

Mr. FOGARTY. Is that made up of veterans not taking advantage of these services?

Dr. HUNT. That is right. There are other groups, too, but they are the largest one.

Mr. FOGARTY. Are there any agencies that have not reimbursed you for services up to date?

Dr. HUNT. For services rendered?

Mr. FOGARTY. Yes.

Dr. HUNT. Not that I know of.

Mr. FOGARTY. The Veterans' Administration has paid for all reimbursable services?

Dr. HUNT. They have paid for all services used. The problem is that they haven't used the services.

FORT WORTH HOSPITAL

Mr. FOGARTY. What is the situation in Fort Worth at the present time?

Dr. HUNT. There we have a hospital with over 900 patients.

Mr. FOGARTY. How many beds?

Dr. HUNT. A thousand beds.

As of last week, we had nine-hundred-and-seventy-odd patients in the hospital, of whom something over 500 were veterans. It is that group that we are planning to reduce somewhat, in 1952, to make room for the drug addicts.

Mr. FOGARTY. Are the others all narcotic patients?

Dr. HUNT. About half are; 250 are addicts and the other 150 are in the neuropsychiatric category, largely seamen, with a few coast guardsmen.

Mr. FOGARTY. In 1952, will you eliminate all the veterans from the hospital?

Dr. HUNT. No, sir. We are planning to reduce the number of veteran beds to 235 and to make the additional 300 beds available for the treatment of addicts.

Mr. FOGARTY. On what basis are you reimbursed, on your actual per diem cost?

Dr. HUNT. That is a figure based roughly on the per diem cost. We are speaking of Fort Worth now?

Mr. FOGARTY. Yes.

Dr. HUNT. That figure is set by the Bureau of the Budget each year.

Mr. FOGARTY. What is that?

Dr. HUNT. At the present time it is $6.75 a day.

Mr. FOGARTY. That is what the Veterans' Administration reimburses your agency?

Dr. HUNT. Any of the other Government agencies would reimburse us at that rate.

Mr. FOGARTY. So you are operating at a loss as far as reimbursements are concerned from the other agencies?

Dr. HUNT. As far as our over-all average is concerned; yes, sir. As far as that hospital is concerned, we are able to operate a neuropsychiatric hospital with a smaller staff than a general hospital. They are long-term patients and various other factors enter in, and we probably aren't losing too much on it. I don't know. It is hard to be sure of cost accounts on individual hospitals.

REDUCTION IN REIMBURSEMENTS

Mr. FOGARTY. This decrease of reimbursables of $522,000, will that be made up in total by the elimination of the 250 veterans out of the Fort Worth hospital and taking in the 250 addicts?

Dr. HUNT. It is essentially all due to reducing the number of reimbursable patients at Fort Worth by 300 from the present 535 to 235.

Mr. FOGARTY. Can you give me a breakdown of that transfer? Give me a breakdown of this $522,000 reimbursements.

Dr. HUNT. The number of veterans in the general hospitals will be reduced by 97 below the present budgeted number. The number in the Fort Worth hospital will be reduced by 300. That produces a total reduction in reimbursements in the operation of hospitals of $558,969.

There are two other factors concerning reimbursement. In the operation of health units there will be an increase in reimbursements of $37,169, and in details to the other agencies there will be a decrease of $317,000. These are shown on the table on page 55–B, which adds up to—there are two pluses and one minus—an increased appropriation requirement of $522,117.

Mr. FOGARTY. Will that require any additional personnel?

Dr. HUNT. We do not expect so; no, sir. We expect that the operation of the hospital will go on pretty much as it has, simply exchang-

ing one group of neuropsychiatric patients for another. The present patients require certain things in their treatment which are not required of drug addicts. The same thing is true on the other side. The treatment of drug addicts requires certain activities which are not carried out in the general neuropsychiatric hospital, and we expect about the same staff will be necessary to carry out the work.

EXPLANATION OF GENERAL INCREASE AND REDUCTION OF POSITIONS

Mr. FOGARTY. You show a general increase of $653,000 in direct operation and a decrease of 302 positions. How does that come about?

Dr. HUNT. That is correct. The largest increase is approximately $500,000 for the longevity increases for civil service employees and for the periodic mandatory promotions for the commissioned officers among the people who are now on duty.

Then there are the other increases such as the pay in excess of 52 weeks, $75,000. Operation of outpatient clinics, $135,000. Operation of health units—this is a plus $31,000 covered by reimbursements. Operation of Coast Guard, $106,000.

Then to take care of those mandatory increases and stay within the amount of money, the total ceiling, that we had available, it meant that we had to drop employment by 300.

INCREASE FOR SAN FRANCISCO HOSPITAL

Mr. FOGARTY. What about this $506,000 increase in other objects?

Dr. HUNT. That has two principal factors. The largest single one is the equipment which will be necessary for the addition to the San Francisco Hospital, construction of which was started last year. That, incidentally, will add only a few beds. It is primarily for better outpatient and supporting facilities. It will need some equipment, some $341,000 worth all told.

The other principal factor is the rise in prices, which has raised food costs by about $80,000 and other supply items by about $100,000.

Mr. FOGARTY. What does this equipment consist of that you are going to require at this hospital?

Dr. HUNT. Equipment for the out-patient department.

Mr. FOGARTY. Is this an addition to the existing hospital in San Francisco?

Dr. HUNT. Yes, sir.

Mr. FOGARTY. How many beds?

Dr. HUNT. The number of beds to be added will be about a hundred over the present constructed capacity. At the present time, that hospital is operating right at the level of constructed capacity, which means that beds are crowded together. They are put out in solaria and various other places where we do not normally like to have them.

This was an addition to the hospital that was planned 10 or 12 years ago. The war, of course, held it up. Public Buildings went ahead with it after the war. As I say, the bed capacity will be increased somewhat and more important, we will have a good out-patient department where we can really take care of patients without adding to the admissions at the hospital. We can do the various diagnostic tests, and so on, on an out-patient basis.

The equipment that will be needed is of various sorts, but it is the kind of thing which you do need when you build a hospital or add to a hospital—nursing ward equipment, which is estimated to be $128,000; surgery equipment, $14,000; dental equipment, $29,000; X-ray equipment, something over $50,000. Various equipment for kitchen needs, adding up to over $20,000.

EMPLOYEE HEALTH SERVICE PROGRAM

Mr. FOGARTY. What are you doing in the employee health service program?

Dr. HUNT. That now consists primarily of consultations with programs that are in operation or that are being planned, and to some extent supervision of programs which we operate ourselves under a reimbursable basis.

Mr. FOGARTY. Are there any new programs planned for any agency?

Dr. HUNT. Several of the agencies have come in with new programs during the last several months. That has been at their own instance, not ours. They come to us as provided in Public Law 658 and ask our consultation. We are required to give it to them, and in several of these instances they have then gone on to ask us to operate the program. They reimburse us for this activity. The money comes from the appropriation to the other agency, but we have a supervisory responsibility in our office.

Mr. FOGARTY. Over and above the reimbursements you expect in 1952, what do you anticipate will be the amount expended by you in this employee program?

Dr. HUNT. $75,000—the budgeted amount.

Mr. FOGARTY. The committee a year ago, in fiscal 1951, allowed $50,000 for this.

Dr. HUNT. That is right. During the year we have found that we had to use that amount of money for the direct payment of the staff doing this work.

Mr. FOGARTY. How many do you have on that staff?

Dr. HUNT. There is one doctor, two nurses, and, I believe, five clerical employees, plus employees at the two health units in the Federal Security Buildings.

Mr. FOGARTY. Does that amount to $75,000?

Dr. HUNT. That is $50,000. That is what we are doing this year. The reason we feel an increase is necessary is that it has not been possible to do that job without drawing on other resources in the division, and we feel that it is a more realistic picture to budget $75,000 for it. Actually it isn't additional full-time positions. It is part of my time and part of Mr. Ranney's time in budget work. It is an estimate of what the division is contributing over and above the actual salaries of those people.

Mr. FOGARTY. That increase of $25,000 doesn't mean any increase in positions?

Dr. HUNT. No, sir.

MARINE HOSPITAL AT NEW ORLEANS

Mr. HEDRICK. Several weeks ago some of the members of this committee, myself, and Judge McGrath, visited your marine hospital in New Orleans. There was quite a lot of reconstruction and remodeling

and new equipment being brought in. Do you know about what money is proposed to be spent?

Dr. HUNT. All of the remodeling, as far as I know, was provided by the Public Buildings Service. As you know, they are our landlords. They own the buildings and they have the responsibility for major maintenance and for remodeling.

Mr. HEDRICK. They wouldn't buy the new equipment, would they?

Dr. HUNT. The equipment is our responsibility; yes, sir.

Mr. HEDRICK. About how much are you going to spend for equipment down there?

Dr. HUNT. We can supply that. I do not have it here.

Mr. HEDRICK. I think it would be interesting for the record.

(The information requested is as follows:)

We expect to spend $28,000 to $30,000 for equipment at New Orleans this year. Some of that is for normal requirements, some is related to the alterations. It is not possible to make an accurate differentiation, but it appears that $15,000 to $20,000 of the total amount is in connection with the alterations.

USE OF ELLIS ISLAND HOSPITAL IN AN EMERGENCY

Mr. MCGRATH. One other question relative to Ellis Island—some people have advanced the thought that in the event of a major problem that might arise in New York City, which we hope will not, that Ellis Island would have a great benefit for a hospital center. They predicate that statement upon the fact that because of the contour of Manhattan Island, which becomes very pointed, and the streets going east and west being very short, that any of those buildings tumbling down would create rubble up to 60 feet, so that traffic north and south and east and west would be completely stopped, so that a method of getting out of the island, particularly below Fourteenth Street, would be by boat.

They have submitted the thought that Ellis Island in an emergency would be a very important cog in caring for the people of our city.

Have you given any thought to that proposal?

Dr. HUNT. I have talked to Commissioner Kogel about that. Incidentally, the medical officer in charge of our hospital at Staten Island has worked very closely with Commissioner Kogel on the whole medical problem for civil defense planning for New York, and both he and I discussed this with the Commissioner.

I think I may quote the Commissioner in this fashion. He agrees that those buildings would be of potential value in certain types of disasters affecting the New York area. His point of view, however, is that, if he needs it, he will just take it, and there is no particular need of maintaining it in a stand-by condition during the interim.

Mr. MCGRATH. How long would it take you to retake it and refurnish it and get it into working condition as a hospital?

Dr. HUNT. Under those circumstances, I think the general feeling is that what you need is a place to put people without too much regard for the niceties of hospital equipment. I think that is the reasoning of the Commissioner. I am quoting him indirectly.

Mr. MCGRATH. But as a public health man, don't you think that it would be wiser and more efficient if you had a place that was actually going than a place you had to retake and reactivate?

Dr. HUNT. If there were lots of money and if no one else had a use for that building in the meantime, my answer would be yes. Under the present circumstances, I am not so sure.

Mr. MCGRATH. Then you feel that all of these preparations for civilian defense could really wait until a disaster?

Dr. HUNT. Absolutely not. I am sorry if I implied that. I didn't mean that.

Mr. MCGRATH. Don't you think it is possible that Ellis Island might be put to another use other than a hospital at this time and it might be used for office space or other uses? Then you would have to come in and clear that place out during the city emergency. There would be quite a few days before you could get to work in it. Wouldn't it be quite a while before you could reactivate it into some sort of a working hospital?

Dr. HUNT. It depends upon what use it is put to in the meantime. We have that the Coast Guard would like to use it as barracks. If that is the case, it could be turned back into a hospital very, very quickly.

Mr. MCGRATH. How quickly would you say?

Dr. HUNT. Twenty minutes.

Mr. MCGRATH. And you would have all the equipment there to care for the people?

Dr. HUNT. The equipment, stockpiling of equipment, is quite another question. We wouldn't have that even if we had the hospital in normal operation.

Mr. MCGRATH. You have some in it?

Dr. HUNT. Some.

Mr. MCGRATH. You have the personnel; do you not?

Dr. HUNT. Yes, sir.

Mr. MCGRATH. Do you still think you could get your personnel and reactivate in 20 minutes?

Dr. HUNT. Not to that extent; but you could start receiving casualties in 20 minutes if it were a Coast Guard barracks.

Mr. MCGRATH. You could if you could get them up in that period of time. By the time you get your personnel over there, I am afraid it would be longer than 20 minutes.

CARVILLE HOSPITAL

We were very much impressed with the fine care that is taking place down in Carville. I think Dr. Hedrick agreed that the patients have a fondness for the institution, for Dr. Johansen and the nursing and entire staff. It was really a pleasant thing to see how appreciative they were and how cooperative they were.

Your ultimate goal there is to get away from the stigma which is attached without just cause to that disease?

Dr. HUNT. That is right.

Mr. MCGRATH. Did you give any thought to the elimination of the wire fencing around the place, which was one of the objections of the patients? I was wondering if you would like to explore that. You may have an answer to that.

Dr. HUNT. There is no easy answer to that, Judge McGrath. The basic concept of that hospital is still, and must be for some time to

come, segregation from the general population. That is required by the local populace, if for no other reason.

Mr. McGrath. The answer is an educational one.

Dr. Hunt. Yes.

Mr. McGrath. That was what I thought. I wanted to get your reaction.

I was quite amazed when the Administrator, Mr. Ewing, said he spent Sunday at the hospital but he did not see the "prison," if I might use that terminology, because there is no other word to describe it, the deplorable conditions in which the five or six patients who have become mental patients, and the manner in which they are cared for. Are you familiar with the building in which these people are housed?

Dr. Hunt. Yes, sir.

Mr. McGrath. When I say it is on the ground, without any basement, and it is in Louisiana, and on low land, with big iron doors and bars and very little ventilation, and light from only one small window, and a cot or a place for these unfortunate people to rest, I describe it accurately. I might say that Dr. Johansen isn't happy about that. But don't you think, if we are to give these people adequate care, that the few of them that do go mental should receive a better place in which to be housed?

Dr. Hunt. We would like very much to do that.

Mr. McGrath. What have you done toward that objective?

Dr. Hunt. Some 10 years ago, as the third step in the building program for Carville, the Congress approved money—I do not remember the exact amount now—for new buildings at Carville. That work was not done before the war came along, and, of course, the money was impounded. Since the war it has not gotten back into any channels that we know of.

Since the war, however, the Public Health Service Building Committee has recommended to the Public Buildings Service that additional building be done at Carville. The omnibus bill which passed last year for public buildings, for the Public Buildings Service, carried an authorization item for over $3,000,000 for additional building at Carville. If and when that money is appropriated and actually made available for building, the needs will have to be resurveyed in relation to the amount of money available.

The three principal needs at the present time are for a psychiatric building, for a new refrigeration plant, and for an improvement in the sewage-disposal system—not necessarily in that order.

The climate down here is such that you have to have good refrigeration; and, obviously, sewage disposal is one of the first things you have to look to. The priority might be reversed from that in which I mentioned them, but those are the three principal needs in the building program in Carville, and we certainly have them very much in mind.

Mr. McGrath. Would that come under you jurisdiction, the planning of that new building or the recommendation for it?

Dr. Hunt. It would be a cooperative project between our Division and the Public Buildings Service.

Mr. McGrath. Have you made any recent application to get this building started, the psychiatric ward?

Dr. Hunt. Not that particular one.

Mr. McGRATH. That is the only one we are talking about.

Dr. HUNT. The Public Health Service Building Committee has within the last month recommended to Public Buildings Service that, as soon as money is available, certain projects be carried out, and this is high on the list.

Mr. McGRATH. I have noticed they built two golf courses there, about which I have no complaint, one for the doctors and the staff and one for the patients. I imagine money was appropriated for that; was it not?

Dr. HUNT. I am not sure how it was handled. It was done before I was in the Division.

Mr. McGRATH. You have seen this spot I am telling you about?

Dr. HUNT. Yes, sir.

Mr. McGRATH. Don't you think something should be done there immediately to remedy that situation? Let me tell you, if we put in our State felons, murderers, into a hellhole like that, we would have everybody and every organization protesting against it.

Dr. HUNT. We are certainly not happy about it. The problem has been primarily one of money, and, secondarily we do not have any control of it.

Mr. McGRATH. Have you any evidence to submit to this committee as to what the cost of this building would be now?

Dr. HUNT. We would have to make a guess, I am afraid.

Mr. McGRATH. We cannot appropriate money on a guess.

Dr. HUNT. The Public Buildings Service will present such a plan, I am sure.

Mr. McGRATH. When?

Dr. HUNT. That, I am sorry, I do not know.

Mr. HEDRICK. Isn't there some place in the buildings there that could be used for the mental patients? Couldn't one wing be set aside for that purpose?

Dr. HUNT. One wing, I believe, is now used for those who are tractable. The problem there is with the violent maniacs, psychotic patients, and also, of course, in the disciplinary patients. We have to run a little village there.

Mr. McGRATH. Dr. Johansen said there is hardly any disciplinary problem.

Dr. HUNT. That is true. It only happens once in a great while. If somebody commits an infraction of law or a breach of the peace, we cannot send him out to the local jail. We have to have our own jail. That is what this was designed for.

Mr. McGRATH. That was built to take care of a man who committed a murder; wasn't it?

Dr. HUNT. Very probably.

Mr. McGRATH. That is where the old jail is, where you have these people.

Dr. HUNT. The more violent psychotic patients do have to be housed there.

Mr. McGRATH. Dr. Hedrick raised a very good point. There is room there, with certain physical changes to be made, to take care of these people, get them out of that hellhole. That is the point you developed so well.

EMPLOYEE HEALTH UNITS

Mr. DENTON. What are these health units?

Dr. HUNT. In most instances a nurse is on duty to take care of on-the-job illness of Federal workers in a building. It is somewhat comparable to Dr. Calver's work downstairs. Certainly, in most of the Government buildings you will find in one of the corridors that there is a health unit, and the nurse in charge primarily sees employees who are taken ill while at work and makes appropriate disposition. The great majority of them, if they need more than an aspirin or to lie down for a few minutes, are referred to their own physicians.

Mr. DENTON. They are just in the Government buildings?

Dr. HUNT. Just for Government agencies.

Mr. DENTON. How many are there?

Dr. HUNT. Practically every agency has one. We operate 24 units for 20 agencies in Washington and in Denver.

Mr. DENTON. The people, of course, who can go for help there are the same ones who are entitled to health service from the Public Health Service?

Dr. HUNT. No, sir; only to a very slight degree, by and large.

Mr. DENTON. Can a Government employee go there? But you don't treat him.

Dr. HUNT. That is right. We have no authority to treat Government employees as such.

Mr. DENTON. These are primarily for Government employees?

Dr. HUNT. Yes; for on-the-job illness, and as a diagnostic and referral service.

MARINE HOSPITALS

Mr. DENTON. About your 19 general hospitals, are any of them located in the interior of the country near the inland waterways?

Dr. HUNT. Yes, sir; we have three at the Great Lakes—Detroit, Cleveland, and Chicago. We have two on the Mississippi, three counting New Orleans. The other two are Kirkwood, Mo., outside of St. Louis, and Memphis.

Mr. DENTON. I remember we used to have an old marine hospital in Evansville. That was closed up a number of years.

Dr. HUNT. About 5 years.

Mr. DENTON. Then there was one at Louisville; that was closed up in the last 2 years.

Dr. HUNT. That was closed as a hospital about 4 years ago.

Mr. DENTON. I expect you do not have as many men working on the rivers.

Dr. HUNT. That is right.

Mr. DENTON. There isn't the need for it now.

Dr. HUNT. I was stationed at the Louisville hospital toward the end of the war, and 85 percent of our patients were veterans. As soon as they opened the veterans' hospital in Louisville, that provided the answer as far as we were concerned.

Dr. Anderson, Chief of the Division at that time, appointed a board, or rather requested the Surgeon General to appoint such a board, to study the situation, and we found that only a few patients were direct

beneficiaries and all the rest were reimbursables taken care of for some other agency.

Mr. DENTON. Do the merchant seamen and the old rivermen pay anything into a fund for this service?

Dr. HUNT. No; not since 1884.

Mr. DENTON. I have heard some of them say they had paid into a fund, and it was not that far back.

Dr. HUNT. I have had many of them tell me that, too.

Mr. DENTON. Where are the two tuberculosis hospitals?

Dr. HUNT. One is in New York, at Manhattan Beach, Brooklyn; the other is at Fort Stanton, N. Mex., an old Army post.

Mr. DENTON. People who are eligible to receive this public-health service are the ones who are eligible to go to the tuberculosis hospitals?

Dr. HUNT. Yes, sir. Those are for our beneficiaries who are eligible for that kind of treatment. While a seaman is eligible for anything we have to give, the person who is sent to us by the Bureau of Employees' Compensation is eligible for care of his injury, and if he develops tuberculosis or if he has some other type of illness, we refer him to the appropriate physician or State agency.

REIMBURSEMENTS

Mr. DENTON. You received $500,000 in reimbursements last year?

Dr. HUNT. That is right.

Mr. DENTON. That was primarily because the Forth Worth hospital is not going to take care of veterans any more?

Dr. HUNT. It is being reduced from 535 to 235.

Mr. DENTON. Is that reflected in your loss of patient load on page 50 of your justification?

Dr. HUNT. Yes, sir. The crucial point is that, while we lose veterans, we gain addicts, so that, while we do show a drop of 50, from 2,260 to 2,210, in the neuropsychiatric hospitals, my own guess is that we won't have even that much of a drop.

WAITING LIST FOR NARCOTIC ADDICTS

Mr. DENTON. Do you have a waiting list on narcotics?

Dr. HUNT. We do. Dr. Vogel can tell you about that if you wish to question him.

Mr. DENTON. Those are people who want to go in voluntarily?

Dr. HUNT. Yes, sir. We have a waiting list at Lexington, not at Fort Worth.

Mr. DENTON. That isn't reflected anywhere in the decreased costs because you figure you will have as many patients as you had before.

Dr. HUNT. That is right.

Mr. FOGARTY. How many on the waiting list?

Dr. VOGEL. Two hundred.

Mr. DENTON. Are they people who write and want to go there? What kind are they?

Dr. VOGEL. Late in the fall we were faced with so many applicants, especially from the teen-agers, that we had to establish a policy to give them preference for the available beds. We made all applicants for readmission go on waiting lists, so we could admit promptly the first-timers. Those are the people on the waiting lists.

(Discussion off the record.)

KIRKWOOD MARINE HOSPITAL

Mr. SCHWABE. I have only a very few brief questions. What about this Kirkville Hospital? What kind of an institution is that?

Dr. HUNT. That is a general hospital of 153 beds with about 115 patients.

Mr. SCHWABE. When was it established?

Dr. HUNT. We formerly had a hospital in the city of St. Louis, which had been established for many years. I do not remember how far back it was. It certainly went way back into the last century. The new hospital at Kirkwood was built some 15 years ago.

(Discussion off the record.)

Mr. SCHWABE. I thought you said Kirkville. That was so far removed from the ordinary type of hospital that I couldn't understand it.

How many people are there on the staff?

Dr. HUNT. There are 114 people on the staff at the present time.

Mr. SCHWABE. And only two-hundred-some patients?

Dr. HUNT. 115 patients at the present time.

Mr. SCHWABE. That is a pretty heavy staff for that small an institution.

Dr. HUNT. By comparison with voluntary hospitals, that is rather small, sir. The average ratio for voluntary general hospitals of that size is somewhere in the neighborhood of 150 to 160 employees per 100 patients. On that basis we would have somewhere over 165 employees instead of our present 114.

NARCOTIC ADDICTS AND PROBLEMS

Mr. SCHWABE. I want to ask one or two questions with reference to this Kentucky institution. Doctor, a lot of these patients you say are voluntary patients, probably three-fourths of them, and a lot of them have in the past been there for treatment. Some of them have been known, as I recall from the evidence introduced in former hearings of this committee, to come there more or less to spend a vacation or to rest up, and it wasn't so much for a cure as it was that when they were out of employment or needed winter quarters, they would go there and hibernate, so to speak.

How much of that condition exists today?

Dr. VOGEL. We went into that, sir, and made an analysis of repeaters by season, and there is no significant increase in admission by seasons.

Slightly less than 40 percent of our patients have been there more than once and of those who have been there more than once, we have been able to find no seasonal variations that are consistent. There undoubtedly are a few individuals.

Mr. SCHWABE. Your investigation, then, is doubtless based upon inquiries made in this committee some 3 or 4 years ago.

Dr. VOGEL. That is right.

Mr. SCHWABE. This waiting list is composed of repeaters altogether?

Dr. VOGEL. Yes, sir. So far we have been able to admit promptly every first-admission applicant.

Mr. SCHWABE. As far as these youngsters are concerned, who constitute the big group in your first-treatment patients for that insti-

tution, do you associate very much of their problem with smoking marijuana cigarettes?

Dr. VOGEL. Invariably they first used marijuana experimentally before shifting to heroin.

Mr. SCHWABE. Shifting to heroin?

Dr. VOGEL. They smoked marijuana occasionally in their high-school or neighborhood group. Someone suggests it is the smart and daring thing to try heroin. They frequently get started on it without knowing that it is truly addicting, and they will develop dependence without stopping.

Mr. SCHWABE. Where do they get this heroin?

Dr. VOGEL. That has suddenly become easy to obtain near school grounds and in certain neighborhoods of large cities.

Mr. SCHWABE. Who dispenses it?

Dr. VOGEL. It is difficult for us to tell, but there are people who peddle narcotics for a living. Sometimes they are addicts who try to make enough to buy their own addiction. Sometimes they are nonaddicts.

Dr. HUNT. There is no legal distribution of heroin in this country.

Dr. VOGEL. Not one ounce comes from diversion from legal sources. It is all contraband and illegal sources.

Mr. SCHWABE. How do they get started on heroin? What is the inducement to take heroin?

Dr. VOGEL. The inducement is friends or acquaintances who say, "Try some of this stuff. You will get a great kick." Just as an earlier generation experimented with liquor, these kids take the heroin. They usually start by sniffing it in their nose. It comes in white capsules. It is a white powder.

They start by sniffing it. If they find the sensation is pleasant, as many of them do, they will shift to a hypodermic injection to get the maximum effect of the expense of the drug. Absorption is quicker in the vein, and they get a bigger kick.

After they have done that for a few weeks, they quit school and the boys steal and the girls go into prostitution in order to get money to get the drug, or they get sick from withdrawal. In a constant drive to get the next dose of the drug to keep from getting sick, they get into illegal activities and wind up in the juvenile court and then they get their chance to come to our hospital for treatment.

Mr. SCHWABE. Are there any other institutions that are treating these juveniles?

Dr. VOGEL. Outside of the Fort Worth Hospital, which geographically is inconvenient to the centers of addiction, we are the only hospital except for a few private sanitariums where the expenses are prohibitive for most addicts and their families.

Some of these kids, unfortunately, are thrown into jail and do not get to our hospital promptly or never do, and go through their withdrawal illness in jail with no or with inexpert medical attendance.

Mr. BUSBEY. Dr. Vogel, I am particularly interested in this narcotics problem, and I might say, for the benefit of the committee, that I had a little private conversation with Dr. Vogel before the hearing started and he has volunteered to give me some references and information where I might study this problem inasmuch as I am not very familiar with it at the present time. The general testimony from

the National Institutes of Health before this committee disclosed the fact that their main work is preventive. Has your department done anything about cooperating with the law-enforcing agencies of our Government to try to give them the benefit of your experiences with these patients in order that they can better enforce the law if they are of a mind to enforce it?

Dr. VOGEL. Not directly, if I understand what you mean. The law provides that we must keep confidential the records of all patients who come for treatment voluntarily, and we cannot give to the law-enforcement agencies the names or the records of those patients, so they may make criminal investigations. If we did that, the voluntary patients would quit coming to us.

So under the law we may not give that sort of cooperation.

Dr. HUNT. We do work very closely with Commissioner Anslinger here in Washington.

Dr. VOGEL. As far as investigating individual cases that come to us voluntarily is concerned, we cannot make that information available.

Mr. BUSBEY. Isn't there somewhat of a contract that could be worked out where a voluntary patient comes to the hospital and signs an agreement whereby they would stay until you pronounced them cured?

Dr. VOGEL. Such an agreement is obtained now and has been obtained since the hospital was opened in '35, but, after we were in operation 6 months or 8 months, a voluntary patient got a writ of habeas corpus and a Federal judge ruled that as a voluntary patient he could change his mind no matter what he agreed to, unless he had been legally committed as a prisoner or as a mentally incompetent. So the volunteers have been coming and going ever since.

According to a policy, that was worked out largely in cooperation with this committee several years ago, in order to avoid wasting the taxpayer's money by people who come in and out and stay for abortive cures only, we have for several years been refusing to readmit a patient who left against advice unless he voluntarily comes in through this local Kentucky probation and comes through the local court. Then we may hold them, because, if they go out against advice, they violate their local probation and have to do their 12 months in jail.

That is a device known as the blue grass procedure, which we enforce on any readmission who went out against advice the previous time.

Mr. BUSBEY. It seems exceedingly unfair to your institution and what you are trying to accomplish to have patients in there for just a short period of time and then have them leave.

Dr. VOGEL. That is absolutely true. It is one of the symptoms, of course, of drug addiction that they have lost the power of self-control with regard to giving themselves drugs or abstaining from them. It is not surprising. It is a great disappointment to all of us when this agreement whereby they promised to stay for the complete treatment broke down.

Of our readmissions, approximately 40 percent come in through the local Kentucky court, so we can and do hold them to complete treatment.

The bill Dr. Hunt mentioned, which has been introduced in the Congress this year, is similar to that introduced the two previous years. Each time it passed one of the Houses.

That would recognize and allow us to recognize commitments by States of drug addicts and would give us a way to retain such a group without making them acquire a criminal record, as they have to do.

Dr. HUNT. The present Congress has before it H. R. 2831, to authorize the Public Health Service to admit to its hospitals persons committed by the State courts by reason of narcotic addiction. That has been referred to the Committee on Interstate Commerce.

Mr. FOGARTY. Do you have a further statement, Dr. Hunt?

Dr. HUNT. No, sir.

Mr. FOGARTY. Any further questions?

Thank you very much, Doctor.

WEDNESDAY, FEBRUARY 28, 1951.

FOREIGN QUARANTINE SERVICE

WITNESSES

DR. G. L. DUNNAHOO, CHIEF, DIVISION OF FOREIGN QUARANTINE
ROY L. HARLOW, CHIEF FINANCE OFFICER

FOREIGN QUARANTINE SERVICE

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$3,141,000	$3,104,000	$3,000,000
Unobligated balance estimated savings	−10,743		
Savings under sec. 1214		−100,000	
Obligations incurred	3,130,257	3,004,000	3,000,000
Comparative transfer to "Salaries, Office of Administrator, Federal Security Agency"	−12,221		
Total obligations	3,118,036	3,004,000	3,000,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Medical examination of aliens and quarantine inspection of persons, vessels, and aircraft entering United States ports	$2,604,962	$2,521,562	$2,518,000
2. Medical examination of visa applicants in foreign countries	364,397	321,751	321,500
3. Administration	148,677	160,687	160,500
Total obligations	3,118,036	3,004,000	3,000,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
Total number of permanent positions	650	603	603
Full-time equivalent of all other positions	32	33	32
Average number of all employees	665	622	608
01 Personal services			
Permanent positions	$2,484,707	$2,409,649	$2,399,417
Part-time and temporary positions	155,212	163,358	161,000
Regular pay in excess of 52-week base	8,906		8,590
Payment above basic rates	106,762	111,823	111,823
Total personal services	2,755,587	2,684,830	2,680,830
Deduct charges for quarters and subsistence	45,295	41,400	41,400
Net personal services	2,710,292	2,643,430	2,639,430
02 Travel	50,260	54,000	54,000
03 Transportation of things	26,594	24,800	24,800
04 Communication services	15,892	15,900	15,900
05 Rents and utility services	43,246	43,200	43,200
06 Printing and reproduction	9,769	5,300	5,300
07 Other contractual services	78,705	64,200	64,200
08 Supplies and materials	116,055	107,800	107,420
09 Equipment	67,223	45,000	45,000
15 Taxes and assessments		370	750
Total obligations	3,118,036	3,004,000	3,000,000

Mr. FOGARTY. Do you have a statement for the committee, Dr. Dunnahoo?

GENERAL STATEMENT

Dr. DUNNAHOO. I do not have a prepared statement, but I would like to give you a brief word picture of the activities in this Division.

This appropriation covers two basic activities, but they are related. By being related, I mean we have the identical person in our ports of entry doing both types of medical work. The first work is the quarantine work. This is a complicated or elaborate system of preventive medicine to prevent the epidemic diseases prevalent in other countries, from being brought into our country by international commerce. There is a separate law, which is carried out by the same people generally, the immigration work. This is the medical examination of aliens or individuals who seek visas to come to this country to live. These are old activities of our Government.

The first quarantine act was actually passed by Massachusetts in 1647, and the medical examination of aliens was given the Public Health Service as a responsibility in 1891.

FIELD STATIONS

To do this work we maintain 243 stations in the continental United States and in our insular possessions, Hawaii and Puerto Rico, and 25 in foreign countries.

We have a great responsibility to try to screen out, by doing the medical work, and yet expedite or facilitate the movements of ships.

The law is very strict, prescribing a penalty up to $5,000 for any violation of the quarantine regulations. The quarantine work is preventive medicine. It is impossible to make a computation as to the monetary value of a preventive medical function.

ECONOMIC VALUE OF WORK

Our records will show that in our immigration work the cases of tuberculosis and mental diseases that we have caused to be excluded from this country, if we put an estimate of $10,000 for each one of those cases, our work during the last year would have figured over $10,000,000 return on the appropriation.

We have projected this budget on the assumption that there will be no material change in maritime shipping or international aircraft operation due to the mobilization effort. If there should be any material change, we simply have to have some help, somewhat as we did in the last war, in order to speed up the turn-around of ships, which was essential to our total effort. The Coast Guard loaned us 114 people during that period.

FUNDS AVAILABLE, 1951 AND 1952

Mr. FOGARTY. You had available in 1951 $3,104,000. Under section 1214, held in reserve, you had $100,000. You are asking for 1952 $3,000,000. Where was this $100,000 reserve applied?

Dr. DUNNAHOO. We took it from all our activities. Part was taken out of personnel; part was taken out of procurement of supplies and equipment; communication and other items. We just scattered it throughout our appropriation.

ACTIVITIES OF THE SERVICE

Mr. FOGARTY. You say you inspected 30,000,000 persons in 1950?

Dr. DUNNAHOO. That is correct.

Mr. FOGARTY. What does an inspection amount to?

Dr. DUNNAHOO. In many cases, particularly on the Mexican border, it is a perfunctory line inspection. We have to record the total numbers of persons who are admitted to the United States each year and, of course, part of that 30,000,000 people are repeat border-crossers on the Mexican border. In previous years, the committee evidenced a great deal of interest in a tabulation of exactly what we do, and the areas where we do the work. The continental United States is one phase, and we have not yet touched upon our work in foreign countries on the medical examination of aliens. This is a breakdown of everything we do.

Mr. FOGARTY. I think we will include this in the record at this point. (The statement of statistics is as follows:)

Summary of quarantine and immigration transactions

	1948	1949	1950	1951 [1] (estimate)
1. CONTINENTAL AND INSULAR STATIONS				
Medical examination of aliens:				
Total examinations	1,313,803	1,410,310	1,330,622	1,488,942
Total medical certifications	41,161	48,668	53,135	52,137
A	2,444	1,907	1,082	1,134
(a) A-I—Mental conditions			339	294
A-II—Tuberculosis			124	114
A-III—Loathsome diseases			619	726
B	35,073	44,116	47,728	43,548
C	3,644	2,645	4,325	7,455
Aircraft arrivals: (quarantine and/or immigration)	44,715	47,113	39,921	43,866
Vessel arrivals: (quarantine and/or immigration	26,380	24,209	22,389	23,514
Aircraft disinsectized: (sprayed with DDT)	[2]	[2]	13,544	6,918
Vessels treated			967	750
Fumigation	385	256	143	51
Poisoning	[2]	150	123	87
Trapping	[2]	[2]	701	612
Persons inspected for quarantine	26,723,410	26,439,544	30,072,681	31,440,387
Via:				
Border	18,375,325	23,956,470	28,037,060	29,126,244
Aircraft	878,643	968,895	517,276	725,112
Vessels	1,469,442	1,514,179	1,518,345	1,589,031
Persons treated	71,383	138,161	218,616	235,740
Vaccinations	68,838	117,469	207,419	234,261
Observation	[2]	[2]	223	123
Surveillance	[2]	[2]	6,887	1,209
Disinfestation	2,545	20,692	4,087	147
Medical inspection of alien laborers:				
Total examined	[2]	[2]	85,316	[3] 57,549
Total rejected	[2]	[2]	1,129	[3] 1,174
2. FOREIGN				
Medical examination of visa applicants:				
Total examinations	103,199	79,966	89,229	90,435
Total medical notifications	25,111	18,425	26,235	25,776
A	1,267	836	636	420
(a) A-I—Mental conditions			78	87
A-II—Tuberculosis			240	177
A-III—Loathsome diseases			318	156
B	23,844	17,589	19,400	17,880
C			6,199	7,476

[1] Based on workload from July 1 to Oct. 31 of fiscal year 1951.
[2] These figures not available for years prior to 1950.
[3] Actual workload for period Aug. 22 to Dec. 22 of fiscal year 1951.

Dr. DUNNAHOO. We projected the amount of work we will be doing in the coming year based on the reports we have received to date.

Mr. FOGARTY. Does that show an increase in the workload?

Dr. DUNNAHOO. In most of the items. If you will refer to the table, you have the list for 1950——

Mr. FOGARTY. That is fiscal year 1950?

Dr. DUNNAHOO. That is right. Then we have fiscal 1951 (estimate), based on the reports of the first 4 months. Most of the elements show a definite increase in workload.

Mr. FOGARTY. What reimbursements do you get?

Dr. DUNNAHOO. None.

Mr. FOGARTY. What was this $10,000,000 you mentioned in your statement?

Dr. DUNNAHOO. That was simply a statement of the estimated amount which we saved because of the rejection of TB cases and mental cases as a result of our examination.

This morning the committee evidenced a great deal of interest in leprosy. One of the contributing factors to our decrease of leprosy is that the nationals of no other country are admissible to this country if we make the diagnosis of leprosy.

Mr. HEDRICK. Has your department picked up any cases of leprosy?

Dr. DUNNAHOO. Yes, sir.

Mr. HEDRICK. Lately?

Dr. DUNNAHOO. Not lately. Leprosy, when found, makes the person inadmissible to the United States. The shipping companies know they will be penalized if they bring them, so we do not encounter much leprosy.

QUESTION OF ASSESSING CERTAIN COSTS AGAINST SHIPPERS AND CARRIERS

Mr. FOGARTY. On the cost of fumigating the ships, is that charged to the owner of the shipping line?

Dr. DUNNAHOO. We do all our fumigation work. The mandatory fumigations we do out of this appropriation.

Mr. FOGARTY. You get no reimbursement?

Dr. DUNNAHOO. No reimbursement. We have no legal authority for reimbursement. Our work has been construed as the protection of the health of the civilian population and is of no service to the commercial interests. In fact, they would gladly dispense with us if they could. We are sort of a sanitary policeman over maritime ships and international aviation.

Mr. FOGARTY. Does the Government get reimbursed for custom inspection?

Dr. DUNNAHOO. I am confident they do.

Mr. FOGARTY. There is no way you can collect under the law?

Dr. DUNNAHOO. Not unless the law is changed.

Mr. FOGARTY. In this work you are doing?

Dr. DUNNAHOO. Yes.

Mr. HARLOW. Mr. Chairman with respect to customs there is no reimbursement for customs inspections. There are customs duties paid, and in some cases, where the customs inspectors work overtime, the shipping companies pay the overtime.

Mr. FOGARTY. They pay the overtime. In any unusual cases, where the shipments are being cleared in port, where you have to have your men work overtime, do they pay the overtime?

Dr. DUNNAHOO. They do not. The customs and immigration have the legal authority to collect from the parties at interest for overtime. The Public Health Service does not have that authority.

DISPLACED PERSONS ACT

Mr. FOGARTY. Are you handling the clearance of people under the Displaced Persons Act?

Dr. DUNNAHOO. That is correct.

Mr. FOGARTY. Has that been an increase in load?

Dr. DUNNAHOO. There is a big load but that concerns another appropriation. The Displaced Persons Commission gets an appropria-

tion and allocates to us enough money to carry out their medical obligations under the law. We get $450,000 allocated this year from the Displaced Persons Commission.

Mr. HEDRICK. It would be hard to estimate just how much money and value this program would have in the fact that you screen and discover T. B. cases that are active. If one of those active T. B. cases were permitted to walk the streets of this country, there would be no way to estimate the number of persons they would infect before found out?

Dr. DUNNAHOO. That is correct.

Mr. HEDRICK. It might run into millions of dollars?

Dr. DUNNAHOO. We made an estimate of $10,000 where a case of T. B. or mental disease was allowed to enter. The case of the mental defective is even more vital in that he may produce defective progeny for the next thousand years. The $10,000 estimate is conservative. It has been estimated at $40,000.

Mr. HEDRICK. I think it would be very conservative.

REASONS FOR INCREASE OVER 1943

Mr. DENTON. All your budget is for personal services, about 90 percent of it.

Dr. DUNNAHOO. That is correct.

Mr. DENTON. I have asked a number of agencies this question, and I would like to ask you the same question: In 1943 I notice your appropriation was $1,234,250. This year it is $3,000,000. Is that increase caused by increased payment of personnel or by increased personnel, or what caused that increase?

Dr. DUNNAHOO. Practically all that increase is statutory increases and in general inflationary costs of operation. We are actually operating with a reduction in personnel.

Mr. DENTON. You have fewer people working now than you had in 1943?

Dr. DUNNAHOO. That is correct. I have a dramatic comparison here of our work in 1941 and in 1951. We have practically doubled the workload during that period with a 10 percent reduction in personnel.

Mr. HARLOW. I was going to say that there is one more element in that increase. In the year you referred to the commissioned officers assigned to that activity were paid from another appropriation, and when their pay was brought into this appropriation, the appropriation went up considerably, and the other one went down.

Mr. DENTON. That was in 1948.

Mr. HARLOW. That took place in 1948, yes, sir.

BORDER INSPECTION

Mr. DENTON. Just one other question—I do not understand these border inspections. Twenty-eight million people inspected for quarantine. Is that just people crossing the border, or what is that?

Dr. DUNNAHOO. That is correct. A lot of these people are repeat or daily crossers. Some of them live on one side of the border and work on the other, but our figures have to be tabulated to include the persons who pass the inspector.

Mr. DENTON. If I were in Detroit and went over to Windsor and then came back, would I be in a category of that nature?

Dr. DUNNAHOO. We have no quarantine restrictions with Canada. We practically wiped out those restrictions.

Mr. DENTON. Suppose I was in San Diego and went to Tiajuana?

Dr. DUNNAHOO. I would say that would show up in this tabulation.

Mr. DENTON. Once or twice?

Dr. DUNNAHOO. Only the entry. We disregard our outgoing people. The assumption is that on return you bring the disease to us.

Mr. SCHWABE. The mere crossing of the border into old Mexico from this country does not subject one to quarantine inspection, does it?

Dr. DUNNAHOO. The local traffic, the people, as you know——

Mr. SCHWABE. Back and forth all the time.

Dr. DUNNAHOO. The town is divided simply by an arbitrary fence line.

Mr. SCHWABE. There is a fence there, all right.

Dr. DUNNAHOO. And those local crossers, we check each one, and. if he is a regular crosser, he must have his vaccination documents. If he is a tourist who goes across and comes back, we generally let him go if he did not go far into Mexico.

Mr. SCHWABE. I have had the experience of going back and forth across the border from this country into Mexico and I have never noticed anyone stop me and ask to inspect me or examine me physically. The same was true of the other people who were in the party. Do you count me going across there even when I am just going to go across and eat dinner?

Dr. DUNNAHOO. On the Mexican border, they tabulate everyone that enters the United States. It would be impossible to get accurate statistics as to why you cross, coming back through the gate and into the United States.

Mr. SCHWABE. You include me in your total number that is set out in this report, don't you? However, there is no actual inspection made.

Mr. DUNNAHOO. You are scrutinized by an inspector who is on the side. There were customs officials and immigration officials and Department of Agriculture officials there.

Mr. SCHWABE. They look at you as you pass by to see whether or not you are bringing back too much merchandise, a few things of that kind.

Dr. DUNNAHOO. It is an excedingly coarse screen, but, if you don't want to go by the Government official, you can wade across the river.

Mr. SCHWABE. I haven't tried that. The other was easy enough. I didn't want to wade across. I was just wondering if a great percentage of this number of inspections are not of that routine nature and actual examinations that have been made, except in this coarse screening process you are talking about.

Dr. DUNNAHOO. You are entirely correct on the Mexican border.

Mr. SCHWABE. That is where the biggest end of it is, the biggest entry point; isn't it? I do not mean just one of those places, but there are a number of them all along the border.

Dr. DUNNAHOO. We staff nine of the principal border crossing points ourselves. We do not consider that a very important part of

our work. We vaccinate against smallpox something like 160,000 people down there. Our most important aspect of our work is people coming from great distances, such as the yellow-fever area in Brazil.

Mr. SCHWABE. That is where you do the most good, but the greatest number of persons you say you have inspected is between Mexico and this country.

Dr. DUNNAHOO. That is an example of the fallacy of reading figures literally.

Mr. HARLOW. May I add one thing? That is the intermingling from the interior of Mexico and the tourists who go back and forth. That is the important element in this border situation. We have to be there and catch these people who come in from these interior points of Mexico and at the same time take a look at you as you go by. Some of our men become adept in detecting these conditions at a very quick look.

Mr. SCHWABE. I can appreciate that, and I am not at all minimizing the importance of your work. As a matter of fact, I think it is a very essential function, but I was merely trying to get this 28,000,000 figure that was referred to by Congressman Denton, and from the number of times that I have experienced this and observed it, I was confident that perhaps a very large percentage of that figure of people, just like I, were those who casually went across and rode back within an hour or two perchance and did not get down into the heart of Mexico and did not stay there any length of time. Yet, they have very little attention. That coarse screening method was employed, as you say, on me and my companions.

INSPECTION OF IMMIGRANTS

I want to ask you, with reference to these inspections that you have made for the people who have come into this country in recent years, particularly since the close of hostilities in World War II, you have attempted to be very careful, I am sure in screening those people, the displaced persons and all others who seek passage to this country from the war-stricken areas of Europe; is that correct?

Dr. DUNNAHOO. That is correct.

Mr. SCHWABE. However, if I recollect correctly, some 3 years ago, as a member of this committee I heard you or someone else testify that you did not always succeed in forcing your rigorous regulations and your careful screening through but that in many instances your attempts to prevent the coming into this country of people who would not get in here under your inspection were successful and they were permitted to come in under certain other inspections.

Dr. DUNNAHOO. You must be referring to the proviso of the Immigration Act which permits certain aliens with infectious diseases to come into this country to get appropriate treatment.

Mr. SCHWABE. No; I refer particularly—and I think the hearings will bear me out—to where the State Department did not screen them as accurately as you did and let a lot of them through that you ordinarily would not have let through and your excuse was that you did not have personnel sufficient to take care of all of them who were to be inspected.

Dr. DUNNAHOO. That is correct. We staff 25 stations. The State Department maintains about 254.

Mr. SCHWABE. And we gave you an increased personnel 3 years ago, if I remember, for that particular service.

Dr. DUNNAHOO. No, sir.

Mr. SCHWABE. Three years ago.

Dr. DUNNAHOO. I believe not.

Mr. SCHWABE. You were asking for it, weren't you?

Dr. DUNNAHOO. We did not ask for it.

Mr. SCHWABE. You said at any rate you did not have sufficient personnel to make an accurate screening of those who wanted to come to this country from the war-torn areas of Europe and that many of those got through the stations maintained by the State Department without your careful screening; isn't that right?

Dr. DUNNAHOO. I would not like to leave in the record that a lot of them got through, because we actually did not do the medical work ourselves. I do not believe we could substantiate that with the facts. We do not staff all the consulates because it doesn't warrant an American doctor in most of those places. We are striking a compromise with the funds we have.

Mr. HARLOW. They go through quarantine when they get on this side.

Mr. SCHWABE. I know they do. This quarantine is not as strict as it is on the other side.

Dr. DUNNAHOO. This is line inspection here and inspection of documents.

Mr. SCHWABE. It is supposed to be perfunctory here because it is supposed to be performed on the other side.

Dr. DUNNAHOO. When we see our own doctor's name on the bottom of the document, we rely on it; when we see a foreign doctor's name we check it closely.

Mr. SCHWABE. What do you do when you see a certification by a doctor from the State Department?

Dr. DUNNAHOO. They have no staff for this purpose.

Mr. SCHWABE. They do not screen them, then?

Dr. DUNNAHOO. They screen them.

Mr. SCHWABE. By some foreign doctor?

Dr. DUNNAHOO. That is right.

Mr. SCHWABE. You do not give them the same credence as you do your own group?

Mr. DUNNAHOO. We do not.

Mr. SCHWABE. For the reason that you know they are not as painstaking and not as careful; isn't that true?

Dr. DUNNAHOO. Entirely true.

Mr. FOGARTY. Do you have any further statement to make?

Dr. DUNNAHOO. Not if the committee is satisfied. We did want to emphasize these diseases a little because they are disappearing from the American scene and the medical scene does not see them. Smallpox—that is a disease that most of you have forgotten. Yet, within the last 3 weeks in Calcutta there have been 464 deaths in 1 week from this disease. It smolders in the Latin countries.

This [showing picture] is a seaman who came into the port of New York. The people are forgetting that these things can happen to us.

Mr. FOGARTY. I do not think this committee is forgetting because we have had a lot of evidence on the elimination of smallpox, malaria, and yellow fever, that we have under control in this country. We

appreciate the fact that this agency of the Government is working for the protection of the health of the people of this country by excluding people from this country who have these diseases.

Dr. DUNNAHOO. I am glad to see this committee is aware of what is being done. Yellow fever is just a word to us, but in Brazil they are fighting an outbreak, with 4,000 cases and 400 dead. The disease is creeping southward. We have airplanes coming in from those areas within a few hours. These problems are not yet solved.

Mr. FOGARTY. We know it, and we know they exist in these other countries, and I think the committee appreciates the work that is being done by your agency, they hope you will be just as accurate as you can in these investigations.

Mr. SCHWABE. Mr. Chairman, I want to add a word to what you say. I concur in what you say 100 percent, but with the additional admonition to these people that we want them to use every bit of effort that they can to perfect their work to the highest possible degree and get the most out of the dollars we appropriate and the greatest benefit to the people.

Mr. HEDRICK. Do you know anywhere that we can save any money, anything we can cut off and save a few dollars?

Dr. DUNNAHOO. We know of no point without definitely jeopardizing the public interest.

Mr. FOGARTY. Thank you, Doctor.

WEDNESDAY, FEBRUARY 28, 1951.

NATIONAL CANCER INSTITUTE

WITNESSES

DR. JOHN R. HELLER, DIRECTOR, NATIONAL CANCER INSTITUTE
DR. NORMAN TOPPING, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH
ROY L. HARLOW, CHIEF FINANCE OFFICER

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$18,900,000	$20,686,000	$19,947,000
Applied to contract authorization	−4,175,000	−5,000,000	−4,825,000
Contract authorization	6,000,000		
Total available for obligation	20,725,000	15,686,000	15,122,000
Unobligated balance, estimated savings	−165,279		
Savings under sec. 1214		−600,000	
Obligations incurred	20,559,721	15,086,000	15,122,000
Comparative transfer from "Operating expenses, National Institutes of Health, Public Health Service"	104,430		
Comparative transfer to—			
"Operating expenses, National Heart Institute, Public Health Service"		−200,000	
"Salaries, Office of Administrator, Federal Security Agency"	−10,856		
"Salaries and expenses, division of service operations, Federal Security Agency"	−8,330		
Total obligations	20,644,965	14,886,000	15,122,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Grants:			
(a) Grants to medical and dental schools and other institutions and to individuals for research and training:			
(1) Research projects	$2,632,066	$3,136,000	$3,300,000
(2) Research fellowships	519,392	517,000	500,000
(3) Construction of research facilities	6,000,000		
(4) Teaching of medical subjects	2,006,913	2,040,000	2,040,000
(5) Training stipends	347,192	375,000	375,000
(b) Grants to States for detection, diagnosis, and other control services	3,246,056	3,200,000	3,200,000
(c) Grants for special control projects	1,084,748	949,000	900,000
2. Direct operations:			
(a) Research	3,917,303	3,770,000	3,909,000
(b) Other direct operations:			
(1) Technical assistance to States	463,233	475,000	465,000
(2) Review and approval of research and training grants	81,678	82,000	83,000
(3) Administration	346,384	342,000	350,000
Total obligations	20,644,965	14,886,000	15,122,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
Total number of permanent positions	685	681	678
Full-time equivalent of all other positions	43	23	23
Average number of all employees	672	661	663
01 Personal services:			
Permanent positions	$2,579,109	$2,700,590	$2,763,626
Part-time and temporary positions	112,048	59,900	59,400
Regular pay in excess of 52-week base	7,991		8,604
Payment above basic rates	24,429	10,000	10,000
Total personal services	2,723,577	2,770,490	2,841,630
Deduct charges for quarters and subsistence	5,040	5,040	5,040
Net personal services	2,718,537	2,765,450	2,836,590
02 Travel	80,458	80,000	82,150
03 Transportation of things	12,188	10,800	9,800
04 Communication services	16,742	19,550	19,550
05 Rents and utility services	2,235	2,300	2,300
06 Printing and reproduction	60,953	60,500	60,500
07 Other contractual services	936,150	1,023,600	1,058,100
08 Supplies and materials	523,566	434,160	462,160
09 Equipment	457,532	271,640	272,850
11 Grants, subsidies, and contributions	15,836,367	10,217,000	10,315,000
13 Refunds, awards, and indemnities	237		
15 Taxes and assessments		1,000	3,000
Total obligations	20,644,965	14,886,000	15,122,000

Mr. FOGARTY. Dr. Heller, do you have a statement for the committee?

GENERAL STATEMENT

Dr. HELLER. I do not have a prepared statement, but, with your permission, I would like to indicate the program of the National Cancer Institute and some of the accomplishments.

As you gentlemen know, cancer has been a challenging problem for many, many years. It is one of the oldest diseases we know. It is not only prevalent in man, but in all of the lower forms of animals and plants and has been the subject of some of the earliest medical writings.

Cancer can be considered as a series of diseases rather than one single disease entity. There are probably more cancers known than communicable diseases, so that it is not a simple approach with which we are dealing. There is probably not a single cure for cancer, but more likely cures for cancers. The approaches are multiple.

As I have indicated, cancer is not only multiple in attack but it is multiple in cause. Unlike tuberculosis and other communicable diseases, we know of no germ that causes cancer. There is some controversy in that area, of course. We do not know, at least not for sure, that any viruses, so-called submicroscopic organisms, are involved; neither do we know whether or not there is a deficiency of some kind in the diet, as for instance a deficiency of vitamin B–1, causing a deficiency diseases such as pellagra. There seems to be simply an interaction of many factors which have clinical manifestations which we call cancers. The only common denominator in all of these cancers is the change in cellular growth, in which the cell, for some unknown reason, changes. It loses its power to form legs, arms, teeth, and hair and instead of stopping growth at a point which nature has predetermined, it goes on until not only does it destroy the organism, but itself as well.

The disease or diseases of cancer now have jumped from eighth place as a cause of death to second in the last 20 years. We are dealing with a disease that causes better than 200,000 deaths a year and a morbidity of better than 600,000 a year. We are accustomed to think of cancer as a disease of the older age group, and it is. Persons above 40 are most likely to have cancer, but I should like to invite your attention to the fact that, except for accidents, cancer in children between the ages of 5 and 14 is the greatest single cause of death. It is first in disease deaths in children between 5 and 14.

As you can appreciate, this is primarily due to the fact that great advances have been made in communicable disease control with savings of lives from dysentery, tuberculosis, syphilis, and so forth, and the mortality from cancer is therefore emphasized. We slowly have been able to do something about cancer deaths, but not as fast as we have been able to prevent deaths from communicable diseases.

PROGRAMS OF THE INSTITUTE

The problem then is one of understanding cancer, of diagnosing cancer and, of course, of treating it, with the ultimate goal of prevention. The program of the National Cancer Institute for which we are here in support, operates in three major areas. One is that of carrying out intramural research at Bethesda. The second is the carrying out of research and training and control activities in other institutions—universities, cancer hospitals, and so forth. The third, which we call control, has a very broad connotation. It is the translation of what we find in our laboratories, that which we find as a result of studies and field investigations carried to the private physician and to the public, with the goal of prevention uppermost in our minds.

As far as research is concerned, there are three major approaches. One is a study of the causes of cancer. Paradoxically enough, while we do not know the cause of cancer, in a broad sense, we probably know more things that cause cancer than causes for any other disease,

yet we do not know whether it is a germ or whether it may be a virus, as it seems to be in some instances. We know that irritants can cause cancer. We know that we can produce cancer with the use of certain chemicals in almost 100 percent of the cases in certain laboratory animals. We know that in some industries, such as the chromate industry, exposure can cause an increase in the amount of cancer in workers, sometimes up to 15 to 20 times the occurrence in a normal population.

There are many areas in which we have medical intelligence in the causation of cancer. We constantly are striving to improve that knowledge and take advantage of it to treat people. More importantly, we seek to prevent the occurrence of cancer by knowing the cause and either removing the cause or removing the people from the cause.

STUDY OF THE CELL

The second major approach is a study of the cell. We inevitably and invariably get back to the cell as the unit that we are working with because that is the basic unit of life, and cancer simply is an aberration or a distorted growth, of the cell, which causes it to go berserk. Therefore, a study of the cell, both the normal and the cancer cell, and the factors that make for possible transition are what we are concerned with.

You gentlemen saw yesterday, in Dr. Earle's laboratory, some very important fundamental work in tissue culture. He took one single cancer cell and grew a substantial mass of cells which in turn could be separated for appropriate laboratory examination.

I think you can appreciate the significance of that discovery in other fundamental laboratory approaches, with the goal of finding ultimately a prevention of cancer through these minute, laborious steps.

STUDY OF TUMOR-HOST RELATIONSHIP

The third major approach in research is study of the tumor-host relationship. For instance, we ask ourselves: Why does cancer occur in some individuals and not in others? Are cancer cells present in all individuals and for some unknown reason, call it a trigger mechanism, something sets them off and we have cancer in an individual? Why will 1 out of 5 women above the age of 60 ultimately have cancer and perhaps die of the disease? Why do the 4 out of 5 escape it? Why do young children have leukemia?

All these questions can be answered through understanding of this very difficult relationship between the tumor itself and its host. We can start with animals. We know we can produce cancers in a certain percentage of mice or rabbits, even dogs. We know how long it takes, what we can do to save that animal at an appropriate time in its life cycle. All of these things can be, up to a certain point, translated to man.

The effective answer as to the treatment and prevention of cancer, then, as you can appreciate, results from the knowledge that we get from the three major attacks and the interrelationship of facts. They will fit into place some of these days, and we will come out with either

the cures for a specific cancer or a definite knowledge of prevention, if we cannot establish definitely cures in all areas.

It might interest you to know that, out of the first 5,000,000 men inducted in World War II who were between the ages of 18 and 37, 32,500 were rejected because of cancer. That is another item in support of the fact that, while cancer is primarily a disease of older-aged people, it nevertheless has some very practical significance in our contemplation of our economy and the productiveness of our younger-age group.

RESEARCH IN OTHER INSTITUTIONS

The second major area in our approach in the National Cancer Institute has to do with making it possible for research to be done in institutions throughout the country, the training of research people, the training of physicians and making it possible that cancer knowledge will be extended and accelerated at a greater rate than it has previously.

At present we have 158 men in training in research, on research fellowships from the National Cancer Institute, which is an integral part of the National Institute of Health training program. In addition, we have 100 physicians from cities throughout the country who go to institutions of their choice and become better surgeons and medical men or radiologists or pathologists. They go back to their home towns or cities and do better surgery, not necessarily just cancer surgery. We know, from experience, that these men will reduce the mortality from cancer appreciably in their areas and, even more importantly to us, from the control viewpoint, will establish diagnostic and detection centers, which are quite potent factors in improving the earlier recognition of cancer and a better diagnosis. This particular activity is extremely important and one in which we believe the tax dollar is being spent very well.

CONSTRUCTION PROGRAM

In the construction program, as you know, we have a finished product now, insofar as the funds are concerned, in which there have been 63 grants totaling $16,303,000. This has afforded laboratory and clinical research facilities in 27 States and in the District of Columbia in nongovernmental institutions, mostly medical schools. We now have some of the facilities in which basic research is carried on to a very large degree. As a result of the $16,303,000 which this Congress made available, I think in a very foreseeing way, $106,000,000 has resulted in local funds from the stimulation of these funds. The people themselves have put that much additional money into research facilities, so that, in our judgment, we believe this has been a very successful and worth-while approach.

CONTROL OF CANCER

The third major area of the National Cancer Institute has been that of control. Our attack this year is planned on five major fronts.

One is the accumulation of knowledge, particularly the influence of diet and occupations, either on the initiation of the disease or its spread.

Second is the training of workers in cancer, not only medical people but nurses, social workers, and lay persons.

Third is the improvement of methods, techniques, and resources generally in the community.

Then there is the better utilization of what we now have and what we know. We have an axiom in cancer that, even with the tools we have now—which, admittedly, are not the sharpest in the world—we could reduce mortality something in the order of one-half if we could get people to come to be treated early enough and alert all medical people to the point that their index of suspicion of cancer is high, so that they will always think of cancer.

From experience, we know that in several good medical centers mortality can be reduced more than one-half.

The fourth point is the improvement of cancer services and facilities, again going back to the maxim that every physician's office can and should be a detection center and every hospital a diagnostic center.

This is coming to some fruition as a result of the combined efforts of the American Cancer Society, the major voluntary agency in this area, and our Institute. These groups work very closely together, as Dr. Sebrell mentioned yesterday.

For instance, the Director of the National Cancer Institute is on the board of directors of the American Cancer Society, and on some of their important committees. American Cancer Society officials, in turn, sit in on certain important advisory committees to us. We go ahead jointly on the making of certain films and certain educational material. It has been a very worth-while relationship, and I think a very efficient procedure.

The fifth point in this attack in the control program is a realistic study and evaluation of techniques and service. In other words, is what we are doing the efficient way to do it? Can we improve it? How can we improve it? How can we work better with State health departments and private physicians? We have been able to improve our attack by keeping our hands closely on the pulse with the American Medical Association and other medical associations, both State and local.

PROGRESS IN FIGHT AGAINST CANCER

One instance of that is that, whereas in 1947 we had 407 cancer-diagnostic facilities in this country, we now have a thousand, 3 years later. These thousand facilities have been brought about through the State and local health departments, private physicians, and others who are concerned in the improvement of cancer-diagnostic facilities.

We have a program of cooperation with medical schools in which every 4-year medical school and all but two of the dental schools now participate. Better cancer teaching is afforded at the undergraduate level, so that these young scientists, when they get out, will be indoctrinated with the latest methods and the very highest order of teaching, as we now know it. By we, I mean the medical profession. In this way the patients will have the benefit of the most modern and finest knowledge available.

In turn, through the program these young physicians will have the advantage of refresher courses, the utilization of the best teaching films and new medical literature.

We are therefore approaching the hoped-for goal. Somewhat slowly perhaps from some viewpoints; nevertheless, I think definite advances have been made. For instance, the death rate in cancer in women has slowed down to the point where we see an actual diminution in the mortality of cancer among women. There has been about a 25-percent decrease of mortality from cancer in women in the major medical centers brought about through early diagnostic procedures, better surgery, and better medicine generally, and a 10-percent overall decrease of mortality from cancer in women throughout the United States. I do not know that one can point to any one single thing that has done that. Certainly, the better medical care, the better alertness, higher degree of suspicion on the part of physicians, the earlier recognition on the part of women themselves that they need to go to physicians earlier, undoubtedly, all have contributed.

The picture of mortality in men from cancer is not quite as promising. We have not yet succeeded in being able to influence markedly the slowly rising occurrence of cancer in men, particularly cancer of the stomach. Almost 50 percent of all cancer mortality in men comes from cancer of the stomach. The picture has improved somewhat, however. Instead of there being a 5-percent survivorship for 5 years, it has run, in some of our better medical centers, to 10-percent survivorship. That is not a bright picture, but it means definitely that advances have been made.

Another advance has been that the diagnosis of cancer of the stomach, aided through grants from the National Cancer Institute, presents a happier picture today. At the Johns Hopkins Hospital, techniques in the radiological examination of patients make it possible to make a diagnosis when the stomach cancer is small, perhaps not more than 2 millimeters. A millimeter is a tenth of a centimeter, as you know, and a cancer of 2 millimeters, which is a very small one, can be detected through radiologic means.

The University of Minnesota has done some very fine work in the earlier diagnosis of cancer through a crude screening device, depending upon the lack of acid in the stomach. This lack of acid is believed to be a foreruuner of cancer.

Another advance has been made in the treatment of breast cancer and cancer of the cervex in women. One of our own officers working in the National Cancer Institute has been able to bring about some dramatic improvement in cancer of the breast through the massive intravenous administration of a hormone. This is in an early stage, but there is enough promise that it may well be that we can see the same sort of thing in this that we once saw in the treatment of syphilis, in which massive doses of arsenic overwhelm the infection to the point that it cannot proceed.

I am not naive enough to say we can stop cancer completely in this manner; but, if we can slow it down so other procedures like surgery and radiation can have a better chance, we will have an achievement. That is a distinct adavnce not limited to the National Cancer Institute, but among other institutions throughout the country.

We have found 100 out of 3,000 chemical agents tested to be effective in tearing cancer cells to pieces. The difficulty is that we have not been able to detoxify them to the extent that they will not harm normal tissues as well. This is a slow, laborious process, but advances are being made.

In this same area we have been able, with the use of antifolic compounds and with the use of nitrogen mustard compound, which is the old mustard gas in which nitrogen has been substituted for sulfur, to prolong the life of persons with Hodgkin's disease and certain of the cancers of the blood. These people now have a much longer and happier life expectancy and can be productive, whereas in the old days they would have died much sooner. This treatment was not available 5 years ago. It is an advance made in the last 2 or 3 years. The promising thing is that, while we cannot cure these compounds, because they are in a crude stage, refinements may enable us to extend the life expectancy of these people and also to make it possible that the use of other sharp treatment tools may result in cures. I think that is definitely an encouraging picture.

Also, there is an encouraging picture in the earlier diagnosis of brain tumors. Some very important work has been going on using a compound called iodofluorescein, which has an isotope of iodine in it. When injected in the vein it goes directly to the tumor. One can follow this with a Geiger counter and it enables the surgeon to pin-point his approach surgically and thereby get the cancer in its entirety. That has offered a much higher surgical favorability in cancer cases. Other experimenters are working with this method and attempting to refine this diagnostic process.

We have found that radiation studies in animals show that total body radiation, in leukemia, is more effective than radiation of a definite area of the body, such as the spleen or the liver or an extremity. This may not seem to have much significance, but it is of value in that it represents a reversal of previous knowledge in this field. We have found this out in Bethesda, at the National Cancer Institute. We have also discovered that certain individuals can stand total body radiation much better than they can stand radiation of one portion of their body. That has some significance for the military. This is being explored additionally not only at our own place but in other laboratories as well.

One very important contribution made at our own place in Bethesda has been the preparation of pure amino acids for intravenous feeding. This is of immediate value in the treatment of cancer patients and other persons who cannot take food by mouth. Instead of costing a few dollars a gram, now the material can be produced for a few cents a pound. It can be used on the battlefront after blood and blood substitutes have been administered, and where the patient still needs some sort of protein feeding. That has a distinct value and is a valuable contribution.

You saw yesterday the tissue culture work carried on by Dr. Earle. This has extreme military significance in that the Army and Navy are interested in this approach in the plastic repair of men coming from the battle front. It is possible to grow tissue of known composition, of known sterility and surgically apply it for plastic purposes. That is probably going to be much more important as we learn

more about it, and our laboratory in its tissue culture work is working actively with the Navy in that area.

These are some of the advances and progress made in cancer research and application and is a brief explanation of the program of the National Cancer Institute.

Mr. FOGARTY. Thank you, doctor.

Although there is no cure of cancer known to man today and you have no sure diagnoses, no method of preventing it, and you do not know the cause, there is no question in your mind that advances are being made in all of these fields relating to the treatment of cancer.

Dr. HELLER. Advances are definitely being made, Mr. Chairman. I think it is possible for us to achieve many of the things we want without knowing all of the answers as to the cause, as to the diagnosis. Medical history has revealed that. Such was the case in the field of typhoid. We are passing through the same experience with cancer.

If we knew the unmistakable cause of cancer, it would accelerate our ability to not only control it, but to prevent it.

Mr. FOGARTY. One of the main things you have to do is get it in time.

Dr. HELLER. That is correct, sir.

Mr. FOGARTY. How are people to know that they have it? What are the first symptoms of stomach cancer?

Dr. HELLER. Usually the first symptom is what people usually call dyspepsia or indigestion. Later a loss of appetite and a little later, probably pain. It varies in different individuals. Perhaps the last symptom is the loss of weight, which is brought about by an individual simply not eating as much because he is not hungry. Sometimes there is a silent approach.

Therefore, it is our contention that insofar as it is possible or practical all persons above 40 should have an examination at some interval, we will say, a year, not only for cancer, but for hypertension and other conditions as well. We know from the experience at Johns Hopkins, in which every person who comes to the dispensary gets such an examination, that it is possible to pick up the normal expectancy of cancer of the stomach in persons who presumably were well as far as cancer is concerned.

Mr. FOGARTY. If you pick it up early enough, what can you do with that?

Dr. HELLER. Surgery is the one thing we know will definitely cure cancer of the stomach. There are many cases on record in which prompt early excision of the entire stomach or a portion of the stomach resulted in a permanent cure. Some individuals are living many, many years after the occurrence of cancer of the stomach.

If one waits too long, which probably means 6 to 8 or 10 months after the noticeable lesion is noticed, it has spread to other parts of the body, so it is impossible to remove it surgically.

Mr. FOGARTY. Is the average physician able to detect cancer in the early stages in the stomach?

Dr. HELLER. With appropriate tools, he is. He must have access to a fluoroscopic examination of the patient and know the technique. It is possible for the average physician to do so in his normal office practice if he uses tools that have been developed.

Mr. FOGARTY. How long have those tools been available to the average practitioner?

Dr. HELLER. The tools are just now being made available in their refined sense. We have known of fluoroscopy for many years, but with specific application to the diagnosis of cancer of the stomach, it is a recent development. That has come around because of one of our grants.

Mr. FOGARTY. Where was that developed?

Dr. HELLER. At Johns Hopkins.

Mr. DENTON. What is it?

Dr. HELLER. It is simply the application of an X-ray of the stomach in which the individual swallows a barium solution. The barium goes into the stomach and outlines the organ and by rotating the patient in a 360° circle, it is possible to detect certain differences in the outline of the organ by the barium. Radiologists have learned from experience just what constitutes a disorder, and they can spot it immediately. By larger pictures and more exhaustive examination, they can determine definitely whether or not this may be an ulcer, a cancer, or maybe a deformity of the stomach.

Mr. FOGARTY. This was developed at Johns Hopkins University?

Dr. HELLER. Yes.

Mr. FOGARTY. With the help of a grant under the research program?

Dr. HELLER. That is right. Dr. Russell Morgan is the investigator.

FUNDS APPROPRIATED BY GOVERNMENT AND OTHER AGENCIES FOR RESEARCH

Mr. FOGARTY. Doctor, when was this National Cancer Institute set up by law?

Dr. HELLER. In 1937, Mr. Chairman.

Mr. FOGARTY. As you said in your opening statement, you have close cooperation with the American Cancer Society, which is the largest contributing volunteer organization in this fight against cancer?

Dr. HELLER. That is correct, sir. We are working very closely with this organization, and have our liaison and rapport which are generally very good. We both work toward the same end, and since there is enough work for both of us and, in fact, more work—unfortunately, more and more work—we certainly have been, I think, able to work with a minimum of difficulty and a maximum of correlation of activities.

Mr. FOGARTY. Since we have appropriated money for the construction of research facilities and increased the grants for research in a corresponding manner, the volunteer organizations have increased their appropriations every year. Is that not so?

Dr. HELLER. That is correct, sir. The American Cancer Society has, since it started in 1946 as the American Cancer Society, increased from some 2 or 3 million dollars to something in the order of $14,000,000 now.

Mr. FOGARTY. And at the same time the States and local communities have been stimulated to the extent that they are spending what now? Is it one hundred and some million dollars?

Dr. HELLER. That was in reference, Mr. Fogarty, to the construction-grants program in which, as a result of the Government grants of $16,303,000, institutions spent $106,000,000 for the construction of the facilities. I am unable to give you the exact figure of the States

as to the amount of money that the State and local jurisdictions are spending for cancer. I do not have the figure, but I will be glad to furnish it, if you care to have it.

Mr. FOGARTY. And the only way we are ever going to get the answer to this problem is through research. Is that not so?

Dr. HELLER. I believe so, sir, and basic research, applied as soon as we can, sir.

Mr. FOGARTY. There are some people in this country who believe that any money we appropriate for research is money being thrown away.

Dr. HELLER. We certainly believe, sir, that it is the answer not only to cancer, but to many of our problems, and the translation of basic research to so-called applied research, and as quickly as possible taking it to the private physician.

Dr. TOPPING. Mr. Chairman, may I make a statement along those lines?

Mr. FOGARTY. Yes.

Dr. TOPPING. The Scientific Research and Development Board was set up and made its report, the so-called Steelman committee report, which has been quoted quite widely since its publication in 1947. It made a study of practices of industry insofar as research was concerned, and they found in industry there was a general policy that something in the order of 4 percent of their gross could very profitably be put into research and development. Eventually it paid the industry tremendous returns on that investment, because the new products and new things that were made available by the industry for sale were increased in such tremendous quantities because of their investments in research and development.

It would seem that we know what private enterprise has done in this country, and what the tremendous increase in living standards through our industrial research and development has been, so that we could certainly apply those same general principles to the operations of the Federal Government in a field such as health, where there are no private industries in the health field, and where certainly we will get the same kind of return—not in dollars, but in human life and in happiness over the years.

Mr. FOGARTY. I agree with that philosophy, but there are some people here in Congress who disagree with me on that philosophy, and I can never understand why they could appropriate $25,000,000 for research on plants and animals in a year and forget about research in connection with these killing diseases of human beings. I could never understand why some people would vote for that research and not vote for this type of research that affects you and me, and every other person in this country and in the world today.

FUNDS AVAILABLE, 1951 AND 1952

Doctor, you had available in 1951, $20,686,000, and you transferred $200,000 for the blood program to the National Heart Institute, and you had $600,000 impounded by the Budget Bureau under section 1214. Where is that $600,000 applied?

SECTION 1214 CUT IN 1951

Dr. HELLER. That $600,000 came from several areas. It came from direct research, research grants, grants to States, and from our special project grants.

Mr. FOGARTY. It applies right down the line?

Dr. HELLER. Yes, sir.

Mr. FOGARTY. So you had for comparable purposes, $19,886,000, and you are asking this year for $19,947,000, or an increase of $61,000?

Dr. HELLER. That is correct, sir.

LIQUIDATING CASH REQUIREMENT

Mr. FOGARTY. In that increase is included your liquidating cash for prior contract authority for the construction of these research facilities, which is $4,825,000.

Dr. HELLER. Yes, sir; and you will recall, Mr. Chairman, that this will finish that obligation.

Mr. FOGARTY. It will not complete the program as outlined, but it will complete the construction of these facilities that was stopped a year ago.

Dr. HELLER. Yes, sir. It will discharge the contractual obligations.

Mr. HARLOW. At that point, Mr. Chairman, this was where the $200,000 is that I was talking about the other day. They actually need appropriated in this item only $4,625,000 for liquidating purposes, which will reduce the total estimate from $19,947,000 to $19,747,000.

Mr. FOGARTY. So that will be $4,625,000 to liquidate the prior contract authority?

Dr. HELLER. That is correct, sir.

Mr. FOGARTY. Which will leave the total as $19,747,000, then?

Dr. HELLER. That is correct, sir.

Mr. FOGARTY. Which will be a reduction then of $200,000. Is that right?

Mr. HARLOW. Two hundred thousand dollars even, I think, Mr. Chairman.

Mr. FOGARTY. You have $61,000 increase.

Mr. HARLOW. The $61,000 are the increases that we request.

RESEARCH GRANT PROJECTS

Mr. FOGARTY. Yes. That is right. Now, on your grants to medical and dental schools, you show an increase of $164,000.

Dr. HELLER. That, Mr. Chairman, refers to research projects.

Mr. FOGARTY. What new projects have you, and how many do you have?

Dr. HELLER. This item, Mr. Chairman, is an item on which on June 30, 1951, we will have continuing obligations in the order of $3,000,000, which is the going rate. The request for the increase of $164,000 brings the total amount of funds for new projects up to $300,000. Experience in requests have indicated to us that we have about $1,000,000 worth of good projects coming to us—new projects each year for cancer research. This $300,000 for new projects would represent then

something slightly less than one-third, which is a drastic cut-down in our ability to encourage new research in this field. However, we believe that we can utilize this $300,000 best for radiation projects.

There is a great need for knowledge in the general field of radiation, particularly as it pertains to radiation sickness and the effects of radiation on cancer patients and, of course, the longer-range view as to what happens to people who get excessive doses of radiation, which is of interest to the military.

We have been working with the Atomic Energy Commission, and we have had an ad hoc committee meet with us to advise us as to these projects. If allowed it will enable us to have something in the order of 19 such radiation projects if we utilize the entire sum for radiation, or such part of it as seems advisable to our Cancer Council and advisers, and for such other varied and new projects which come up during the year.

Mr. FOGARTY. How do these projects originate, and how are they approved? What steps do you take from the time they originate until they are given approval, and who approves them?

Dr. HELLER. Yes, sir. These projects originate with the man who is usually in an institution, working there as a research investigator. He gets an idea. He talks it over with his colleagues. He puts it down on paper, on an application form, and it is submitted to our Research Grants Unit in the National Institutes of Health. It is referred to the Cancer Institute for review. It is reviewed and we get into communication with the man, and tell him that this is a project we would like to know more about in order to help him and to get his ideas in a little better form. We can inform him that somebody else is working in this area and that he ought to get in touch with them and work it out. At this stage it is between the invesigator and our own office for completion. It is referred to a study section which is part of our General Grants Branch. They go over this project.

Mr. FOGARTY. That study section is made up of whom?

Dr. HELLER. I am sorry, sir. The study section is made up of nongovernmental experts in the particular field in which this particular project may fall. For instance, if the project is concerned primarily with biochemistry, the study section would be made up of men proficient in that field. If it has to do with radiation physics, it would be composed of nongovernmental experts in the field of biophysics or radiation physics, and so on.

These experts pass upon the merits of this project from the scientific viewpoint, and then they recommend it to the Advisory Cancer Council, which is established by law, and consists of six nongovernmental experts in the cancer field, and six lay persons who have a very great interest in cancer. This Council then goes over the project and recommends to the Surgeon General that it be approved or not, as the case may be.

That is the procedure followed in these research projects.

NATIONAL ADVISORY CANCER COUNCIL

Mr. FOGARTY. Will you put in the record at this point the names of the members of the Council?

Dr. HELLER. Yes, sir. I will be pleased to furnish that.

(The names of the members of the Council are as follows:)

NATIONAL ADVISORY CANCER COUNCIL

Mr. James S. Adams, 44 Wall Street, New York, N. Y. (term expires 1953).
Prof. E. A. Doisy, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis 4, Mo. (term expires 1952).
Prof. W. U. Gardner, Department of Anatomy, Yale University School of Medicine, 333 Cedar Street, New Haven 11, Conn. (term expires 1954).
Dr. Lowell S. Goin, 658 South Westlake, Los Angeles 5, Calif. (term expires 1951).
Mr. Maurice Goldblatt, 333 South State Street, Chicago 4, Ill. (term expires 1954).
Mrs. Oveta Culp Hobby, executive vice president, The Houston Post, Houston, Tex. (term expires 1951).
Mrs. Lois Mattox Miller, 1088 Park Avenue, New York, N. Y. (term expires 1953).
Dr. John J. Morton, department of surgery, University of Rochester Medical School, Rochester 20, N. Y. (term expires 1954).
Dr. J. Elliott Scarborough, Jr., Robert Winship Memorial Clinic, Emory University Hospital, Emory University of Ga. (term expires 1951).
Dr. Paul E. Steiner, professor of pathology and cancer coordinator, University of Chicago, Chicago 37, Ill. (term expires 1953).

Two pending appointments.

EX OFFICIO MEMBERS

Dr. G. R. Callender, Chief, Pathology Division, Veterans' Administration, Washington 25, D. C.
Alternate for: Dr. Paul B. Magnuson, Chief Medical Director, Department of Medicine and Surgery, Veterans' Administration, Washington 25, D. C.
Dr. Leonard A. Scheele (chairman), Surgeon General, Public Health Service, Washington 25, D. C.
Gen. Elbert DeCoursey, MC, Armed Forces Institute of Pathology, room 112, Seventh Street and Independence Avenue SW., Washington 25, D. C.
Alternate for: Dr. Richard L. Meiling, Director, Office of Medical Services, Department of Defense, Washington 25, D. C.
Dr. Andrew C. Ivy (executive director), vice president, University of Illinois, 1853 West Polk Street, Chicago 12, Ill.

Terms expire as of September 30 of the year indicated.

LIAISON REPRESENTATIVES

Surgeon General of the Air Force:
Col. Oscar S. Reeder, USAF (MC), Department of the Air Force, Headquarters, United States Air Force, Washington 25, D. C.

Surgeon General of the Army:
Brig. Gen. Elbert DeCoursey, MC, Armed Forces Institute of Pathology, room 112, Seventh Street and Independence Avenue SW., Washington 25, D. C.

Surgeon General of the Navy:
Rear Adm. F. C. Greaves, Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D. C.

Mr. FOGARTY. Then what authority does the Surgeon General have?

Dr. HELLER. The Surgeon General then has the authority, upon recommendation of the Council, to make these grants to the individuals recommended by the Council. He cannot take such action without the recommendation of the Council. He does, however, have a veto authority if it is in the public interest, as he sees it.

Mr. FOGARTY. And that has only been used once?

Dr. HELLER. Yes.

Mr. FOGARTY. Which you explained?

Dr. HELLER. Yes, sir.

RESEARCH FELLOWSHIPS

Mr. FOGARTY. Now, in regard to your research fellowships, you show a slight reduction of $17,000.

Dr. HELLER. Yes, sir.

Mr. FOGARTY. How are these awards made?

Dr. HELLER. These awards, sir, are made to promising young scientists who apply to the National Institutes of Health for a fellowship to work in some particular institution of their choice in which the institution indicates its desire and willingness to have this young scientist. He competes with other young scientists and the fellowship is awarded on the basis of merit and the promise that he shows, his stated reasons for going into this work, and his desire to remain in the field of research.

Mr. FOGARTY. In other words, you are getting the best of the crop of trainees when they go through that merit procedure?

Dr. HELLER. We believe we are, sir.

CANCER TRAINING GRANTS

Mr. FOGARTY. Now, in regard to the teaching of medical subjects, you show no change there. Is that teaching of medical subjects at various medical schools throughout the country?

Dr. HELLER. Yes, sir. That, Mr. Chairman, is the $25,000 grant to each of the 4-year medical schools; $5,000 to each of the 2-year medical schools; and $5,000 to each of the dental schools—to teach and improve the teaching of cancer.

Mr. FOGARTY. There are only 72 recognized 4-year medical schools in this country at the present time. Is that right?

Dr. HELLER. Seventy-three, I believe, sir.

Mr. FOGARTY. Seventy-three?

Dr. HELLER. Yes, sir. There are 73 now, and there are seven 2-year medical schools. There are 41 dental schools, I believe.

Mr. FOGARTY. So these medical schools are getting some help at the present time?

Dr. HELLER. For the development of cancer teaching. That, of course, helps the general needs of the school, inasmuch as an aid to one part aids the whole.

Mr. FOGARTY. Yes.

TRAINING STIPENDS

Mr. FOGARTY. What are these training stipends.

Dr. HELLER. That, sir, is the training of physicians—physicians who go from their private practices to institutions of choice to perfect themselves in the various clinical specialties and return to their communities.

Mr. FOGARTY. How are they selected?

Dr. HELLER. The stipend is to the individual, which is $3,600 per man, per year.

Mr. FOGARTY. How are they selected?

Dr. HELLER. They are selected in much the same manner as the research fellowships, in which the individual applies and states the institution to which he goes, and their willingness to accept him. On a competitive basis the traineeship is awarded.

Mr. FOGARTY. In regard to the grants to States for detection, diagnosis, and other control services, you have $3,200,000. Are these grants given on some particular formula?

Dr. HELLER. Yes, sir. That is on a mathematical formula basis similar to that of general health, venereal disease, and tuberculosis, and such other grants. It is based upon the same formula of population, financial need, and so forth.

Mr. FOGARTY. And those grants are shown on page 72?

Dr. HELLER. That is correct, sir.

Mr. FOGARTY. I will ask that this table of grants to States on page 72 be included in the record at this point.

(The table of grants to States is as follows:)

Allocation of grant-in-aid funds for cancer control, fiscal year 1951

State or Territory	Allocation	State or Territory	Allocation
Alabama	$70,700	New Jersey	$92,300
Arizona	19,800	New Mexico	18,200
Arkansas	52,400	New York	274,900
California	176,200	North Carolina	87,200
Colorado	30,500	North Dakota	17,700
Connecticut	38,300	Ohio	151,300
Delaware	5,900	Oklahoma	55,400
District of Columbia	15,600	Oregon	37,300
Florida	50,500	Pennsylvania	213,600
Georgia	72,500	Rhode Island	15,300
Idaho	18,000	South Carolina	49,800
Illinois	162,300	South Dakota	18,600
Indiana	79,000	Tennessee	72,800
Iowa	59,600	Texas	147,000
Kansas	44,500	Utah	19,200
Kentucky	72,900	Vermont	11,500
Louisiana	61,800	Virginia	63,100
Maine	24,700	Washington	46,400
Maryland	40,600	West Virginia	42,300
Massachusetts	99,000	Wisconsin	70,500
Michigan	115,500	Wyoming	11,800
Minnesota	63,700	Alaska	10,500
Mississippi	63,800	Hawaii	10,700
Missouri	87,300	Puerto Rico	59,000
Montana	16,300	Virgin Islands	1,400
Nebraska	33,800		
Nevada	9,400	Total	3,200,000
New Hampshire	14,600		

Mr. FOGARTY. What do they do with this money?

Dr. HELLER. They use some of these funds to improve the diagnostic facilities among the various communities in the State. Also to take the information about cancer to the individual; to establish detection and diagnostic centers, as indicated; to improve the diagnostic facilities in existing hospitals, and to offer refresher courses to physicians, as well as to establish generally better practices in the public health control of cancer.

Mr. FOGARTY. They operate clinics?

Dr. HELLER. They utilize these funds for a subsidy of clinics. There are very few States that operate diagnostic clinics.

Mr. FOGARTY. Can you give us a table in the record showing the States that do?

Dr. HELLER. Yes, sir.

(The table is as follows:)

These States provide free diagnostic services or both diagnostic and treatment services to indigent cancer patients:

Alabama
Arkansas
Florida
Georgia
Illinois (diagnosis only)
Iowa
Kentucky
Massachusetts
Mississippi
Missouri (hospital)
New Hampshire
New York (hospital)
North Carolina
Oklahoma
Tennessee
Texas (hospital)
Vermont
Virginia
West Virginia

Mr. FOGARTY. Is anyone eligible to go into these clinics?

Dr. HELLER. Provisions vary from State to State. Some are limited to indigent patients, and others have no restrictions as to persons who may apply for diagnosis.

GRANTS FOR SPECIAL CONTROL PROJECTS

Mr. FOGARTY. The next item is grants for special control projects. What are these special control projects?

Dr. HELLER. Those are projects, Mr. Chairman, which are established for development of cancer services and are made primarily to State health departments, to institutions within States to develop techniques and diagnostic procedures and, in other words, to refine existing practices and techniques that have been available.

Such projects furnish a most desirable and useful method of taking information found in the laboratory and adapting it to the local situations. Right now the preoccupation is with diagnostic tests. We are attempting to perfect diagnostic procedures in the various States. That, of course, is not the only type of project. There are projects for establishing the mortality and morbidity data in the various States for setting up cancer registers to give intelligence as to the occurrence of cancer, and so forth.

Mr. FOGARTY. Does any of this money go for the teaching of professional people, such as physicians?

Dr. HELLER. As a rule, these do not. The States are utilizing their formula moneys for that primarily, sir. I do not know of any project offhand that is utilized primarily for it.

Mr. FOGARTY. But it is used under the grants to the States for that purpose?

Dr. HELLER. Yes.

Mr. FOGARTY. So the local physician is getting some good out of this money?

Dr. HELLER. Definitely, sir.

Mr. FOGARTY. And he is learning the new methods and techniques of surgery and diagnosis, and so forth?

Dr. HELLER. Yes, sir.

DIRECT OPERATIONS—RESEARCH

Mr. FOGARTY. In your direct operations, under research, you show an increase of $139,000.

Dr. HELLER. Yes, sir. You will note, Mr. Chairman, this does not contemplate any increase in personnel.

Mr. FOGARTY. This is all out at your institute?

Dr. HELLER. Yes, at Bethesda. We have field stations which stem from the Bethesda operations. These funds primarily are administrative raises, or the so-called automatic raises for personnel and an adjustment of lapses. It does not contemplate any increase in number of positions.

TECHNICAL ASSISTANCE TO STATES

Mr. FOGARTY. You have under other direct operations, technical assistance to States, $465,000 or a decrease of $10,000. What is this assistance you give the States?

Dr. HELLER. That, sir, is the consultation from our regional offices to States. It has to do also with the administration of grants to the States through the Bureau of States Services, and nursing, and professional, and statistical guidance to States upon request.

Mr. FOGARTY. On request of the States?

Dr. HELLER. Upon request of the States. Yes, sir.

Mr. FOGARTY. Dr. Hedrick?

USE OF FUNDS BY MEDICAL SCHOOLS

Mr. HEDRICK. Doctor, in regard to these grants to medical schools, how do you keep track of these?

Dr. HELLER. We had an ad hoc committee appointed, Dr. Hedrick, in 1947, as advisors to the Surgeon General. They were eminent nongovernmental physicians who recommended that grants be made to medical schools for the teaching of cancer, and they recommended that that each State submit a plan, fully realizing that no person, or group of persons, knew completely what constituted a good teaching program for cancer. So the program has been operating in this way: Each medical school submits a plan that it believes is best suited for its own particular needs. This plan then is gone over by our staff, and reviewed with the appropriate medical school. Usually it is acceptable, because medical schools have been very cooperative and realistic.

Then the coordinators of cancer teaching, who are the men who are responsible for the cancer programing of each medical school, have come together. They now are in process of drawing up on their own volition their version of what constitutes a so-called model cancer teaching program. There will result a plan or a program, or curriculum, which stems from the schools themselves and does not represent any Federal idea of what constitutes a teaching plan.

By and large, these funds have been used very well. There has been a period in which medical schools have had to determine the most effective utilization of the various approaches, but now it is pretty well worked out, sir.

Mr. HEDRICK. Do you have someone who goes around and checks what they do with it?

Dr. HELLER. Yes.

Mr. HEDRICK. How often do you make a check on it?

Dr. HELLER. We make them at various intervals. Some medical schools we know are very well set up, and it is not necessary to go around more than perhaps once a year or once every 6 months. We have other medical schools where someone is there every few months, or every 3 months. Usually it is on the request of the medical school. They are very cooperative and very realistic about these programs, and I think by and large they have realized the responsibility involved.

Mr. HEDRICK. I have been told there are certain medical schools that use some of this money to promote their schools. Maybe in the building of a new laboratory, or new building, or in the hiring of two or three new teachers. Do you know anything about that?

Dr. HELLER. I do not know about building new buildings and all that, Doctor, but I do know it is quite within the province of the plans to employ new people for cancer teaching. That is part of their plan, and quite acceptable.

Mr. HEDRICK. Do you know whether they always limit themselves to cancer after they are hired?

Dr. HELLER. As far as we have been able to determine, most of them have utilized this for that purpose. It is impossible, as I know you can appreciate, for a medical man to adhere strictly to cancer, because cancer cuts across all medical subjects. However, they have been very cooperative, to the best of my knowledge, in this regard.

FELLOWSHIPS

Mr. HEDRICK. Concerning these fellowships, what salary do they get?

Dr. HELLER. $3,600 a year.

Mr. HEDRICK. And where does that money come from?

Dr. HELLER. From our office. It is paid directly.

Mr. HEDRICK. Do any of them come under the GI bill of rights?

Dr. HELLER. This group, while they originally received support from the GI bill of rights, for the most part these have all expired and this is the only support they have.

Dr. TOPPING. There is a ruling, Mr. Chairman, made early in the fellowship program, that there could not be dual compensation. If the individual was entitled to educational privileges under the GI bill of rights he could not have other scholarships or fellowships or whatever you wish to call them. So there has been no dual compensation. That was a very early ruling in the scholarship program.

Now if they had the GI bill of rights on educational grants from the Veterans' Administration which was terminated, we will say, last year, in their eligiblity they might have been picked up on a fellowship from the Public Health Service in order to continue their research training, but there is no overlap and no dual compensation involved.

CAUSES OF CANCER

Mr. HEDRICK. In respect to the toll of cancer, do you feel that irritation and trauma is one of the causes of cancer?

Dr. HELLER. Yes, sir. I think, Dr. Hedrick, that has been demonstrated in certain cancers definitely to be a factor. The difficult part,

sir, has been the one that we have been unable to establish the fact that all trauma and irritation will result in cancer. We know that certain cancers have resulted from irritation and trauma.

Mr. HEDRICK. I know a boy who was injured in a football game on his thigh, and he developed a carcinoma as a result of that injury.

Dr. HELLER. There is some mechanism involved in it which we have not yet been able to work out. Unmistakably trauma is involved, but what is the mechanism that makes cancer appear at the site of the trauma?

Mr. HEDRICK. Do you think that cancer of the tongue and lips results from smoking?

Dr. HELLER. There has been established, Doctor, in the minds of most people, expert in this field, that there is a definite correlation between heavy cigarette smoking and the occurrence of lung cancer. I do not think responsible authorities are yet in a position to state unequivocally that heavy tobacco smoking is a cause of lung cancer. They will state, I think, unhesitatingly, that there is a distinct correlation between heavy smoking and lung cancer.

Mr. HEDRICK. Has there been an increase of lung cancer in the last few years?

Dr. HELLER. There seems to be an increase in lung cancers, which is one of the few cancers that has been significantly increasing. That is correct, sir. Now, whether or not that is altogether an absolute increase, or a relative increase due to better diagnostic facilities and better and earlier recognition of lung cancer, I am not able to say.

Mr. HEDRICK. Do you think there has been an increase of cancers of the brain in the last few years?

Dr. HELLER. The authorities generally do not think there has been an absolute increase. There have been many more cancers of the brain diagnosed than previously, because there has been earlier and better recognition of cancer of the brain. Better diagnostic tools are available for cancers, which formerly were unnoticed, and now have been properly ascribed to cancer of the brain.

Mr. HEDRICK. In other words, they might not have been diagnosed as that before?

Dr. HELLER. That is correct.

Mr. HEDRICK. What is your opinion of the misplacement of weak embryonic cells that might be the cause of cancer?

Dr. HELLER. Dr. Hedrick, as you know, that has been quite a theory advanced for many years, and many people adhere to that as being the heart and the core of the causation of cancer. There are others, however, who admit that while it may be a factor, it does not explain all of the cancers that occur. I do not think there is any doubt that it does explain some of the cancers that occur, but certainly as to some of the others I do not think, at least in view of what we know now, that it can possibly explain their cause.

Mr. HEDRICK. That being the case, it certainly would have to show up in a person 2 or 3 years ahead, it seems to me.

Dr. HELLER. One would think so, and it may well be that it is the mechanism involved in cancer of the brain in children and other early cancers in children.

Mr. SCHWABE. What about leukemia?

Dr. HELLER. I do not know. The causation of leukemia is so difficult to establish that I just do not know.

Mr. SCHWABE. It is frequently found in children at a very early age.

Dr. HELLER. Yes, sir. Acute leukemia is one of the major causes of death in children.

Mr. HEDRICK. Are you familiar with this outfit in Pittsburgh that has been treating children?

Dr. HELLER. Yes, sir. That is the so-called Drosenes-Lazenby Clinic, which is now moving to Indianapolis, Ind. That group believes they have a fungus mold, a brew of which, when injected into persons with cancer, has a favorable influence upon the course of the cancer. That has not been substantiated certainly to anybody's satisfaction.

Mr. HEDRICK. Do you suppose they got their idea from penicillin?

Dr. HELLER. I would imagine they did, sir, as a result of the stimulation of interest in the various molds and fungi.

Mr. HEDRICK. Of course, Doctor, the main thing is early diagnosis. We all know that.

Dr. HELLER. Yes.

Mr. HEDRICK. And, of course, surgery is the most frequent and correct cure of cancer.

Dr. HELLER. Yes.

Mr. HEDRICK. Provided you can get out all the cancerous cells.

Dr. HELLER. That is correct.

Mr. HEDRICK. And I believe what you spoke of a few minutes ago will be a great help in aiding the surgeon. I suppose if a half-dozen cancerous cells are left, why, that patient is not cured. Maybe even one cell.

Dr. HELLER. That is probably true, sir.

Mr. HEDRICK. That is all.

Mr. DENTON. Is this money granted to the medical schools and individuals in research training? I imagine most of it goes to the medical and dental schools?

Dr. HELLER. Yes.

RESEARCH GRANTS PROJECTS

Mr. DENTON. What kind of institution and what is the nature of the individual that is granted to? Are they doctors? And what are they doing?

Dr. HELLER. I think, Mr. Denton, that there are two programs. One the medical and dental schools, and the other is project grants. It is the latter one you are thinking of, I am sure. Those, by and large, Mr. Denton, are investigators in medical schools, State health department people who are concerned with techniques and methods——

Mr. DENTON. That is No. 68. The first one.

Dr. HELLER. Oh, yes. The research grants program, generally.

Mr. DENTON. Yes.

Dr. HELLER. I am sorry sir. I thought you were referring specifically to special projects.

Mr. DENTON. No.

Dr. HELLER. That is mostly the medical and dental schools, and research institutions, which usually are affiliated with medical schools, but sometimes may be operating separately. For instance the Jackson Memorial Laboratory at Bar Harbor, Maine, is a separate insti-

tution to which grants are made, but it is recognized in the cancer field as being outstanding.

HEREDITARY ASPECT OF CANCER

Mr. DENTON. One other thing. Is cancer hereditary?

Dr. HELLER. I do not know, sir. There have been, over the centuries, many who believe that it was. Some studies are now going on and grants have been made to attempt to ascertain what are the factors involved, that is, possible hereditary factors. We know definitely it is true in mice.

Mr. DENTON. That is why I asked that. They developed a strain of mice that had cancer.

Dr. HELLER. Yes. It is possible through inbreeding of mice. Of course, human beings are not inbred, and it is very difficult to come to any sort of conclusion as to whether cancer is hereditary. On the other hand, we have had some extraordinary instances of cancer of the breast being passed down in families, and some of it will certainly lead you to believe there are some hereditary factors; but why is not the cancer passed down in other cases? Those are the sort of thing that are very confusing.

Mr. DENTON. I think that is all.

Mr. HEDRICK. I have one other question. Is it true obese people are more subject to cancer than thin folks?

Dr. HELLER. The information we have at hand is, Doctor, the figures from the Metropolitan Life Insurance Co. would indicate that there is a statistically significant figure which indicates that the more obese person is much more likely to acquire cancer than the thin or so-called normal person. In animals that has definitely been demonstrated.

Mr. HEDRICK. Why is that? Could you explain it?

Dr. HELLER. It has something to do probably with the fat metabolism. Again there is the chemistry of the cell involved in which the protein synthesis is interfered with somehow by the fat and carbohydrate metabolism. I do not understand it, and few people do, as to the exact chemistry involved; but it is in that order.

Mr. SCHWABE. It may not be considered absolutely inheritable. That is for sure. There is no agreement to the effect that it is, but there are certain propensities sometimes that lend themselves to ready susceptibility to disease for some reason or another. Is that not true?

Dr. HELLER. Yes, sir.

Mr. SCHWABE. In the offspring and the progeny. That has always been a difficult problem to differentiate between, has it not?

Dr. HELLER. Yes, sir.

Mr. SCHWABE. Not only in cancer, but in other diseases.

Dr. HELLER. Yes.

CANCER CURES WHICH HAVE BEEN TRIED

Mr. SCHWABE. With reference to the various cures, of course, there have also been all sorts of nostrums and attempts to cure in recent years. The hyperradiation cure has been attempted, but without any pronounced success. Is that not right?

Dr. HELLER. That is correct, sir.

Mr. SCHWABE. After all, some of the greatest men of the country attempted it, and experimented with it on a large scale.

Dr. HELLER. Yes.

Mr. SCHWABE. Likewise, the Lodi or gold cure has practically been abandoned, has it not?

Dr. HELLER. That is correct, sir.

Mr. SCHWABE. You spoke of some great improvements in cancer of the breast in recent years, and in cancer of the cervix. In the latter there is not such a marked advance as there is in the former, is there?

Dr. HELLER. No, sir.

Mr. SCHWABE. And surgery, with the aid of radium and X-ray, is about all that is known there, is it not?

Dr. HELLER. That is correct, sir; with the addition, as I indicated, of course, that there is evidence that the use of certain hormones would slow down growth.

Mr. SCHWABE. That is right. That is only a retarding program or arresting program, as far as you now know definitely.

Dr. HELLER. That is correct.

FELLOWSHIPS

Mr. SCHWABE. These fellowships that are granted are frequently given to men and women who are working in various cancer hospitals as well as schools, are they not? Wherever they have facilities available, contributed to privately or at public expense.

Dr. HELLER. That is correct, sir.

Mr. SCHWABE. And they are given to people who have manifested qualifications along that line as well as the desire to pursue the research work.

Dr. HELLER. That is correct, sir.

RELATIONSHIP WITH AMERICAN CANCER SOCIETY

Mr. SCHWABE. Let us take this American Cancer Society. Is that the name of it?

Dr. HELLER. Yes, sir.

Mr. SCHWABE. It is one of the large private enterprises, we might say, or supported by private contributions, is it not?

Dr. HELLER. Yes, sir.

Mr. SCHWABE. Is that large fund used, or any portion of it contributed to your activities out here at Bethesda, or passed on down through the channels along which you operate?

Dr. HELLER. No, sir.

Mr. SCHWABE. Do you contribute anything to their programs?

Dr. HELLER. No, sir.

Mr. SCHWABE. What, if any, benefit do you obtain from them other than collaboration?

Dr. HELLER. The benefit, Mr. Schwabe, of the mutual interests and planning and interdigitation of programs which makes our programs more effective in the various areas.

Mr. SCHWABE. And to a large extent there is a duplication of effort, is there not?

Dr. HELLER. No, sir. I do not think so. If there is a duplication it is deliberate duplication.

Mr. SCHWABE. A duplication that adds emphasis sometimes is tolerable. I am not necessarily critical in saying that or asking that question.

Dr. HELLER. Yes, sir.

Mr. SCHWABE. But I wanted to know if there was not quite a lot of duplication involved?

Dr. HELLER. I do not believe so, sir.

Mr. SCHWABE. What do they do then that you do not do, and what do you do that they do not do? Put it that way.

Dr. HELLER. Mr. Schwabe, they are, for instance, very interested in detection centers, that is, detection centers in the sense that they are places to which well people go. The official health agencies have not embraced that particular philosophy and have more or less stayed away from it in the sense of financial support.

On the other hand, the diagnostic facilities have been an area in which we have been very interested and concerned. There has been an agreement—not an agreement, but an unspoken and tacit understanding—that establishment of detection centers is a field which they are particularly interested in, and we think it is worth while, but very expensive. We believe it to be a better utilization of funds to spend them in the diagnostic clinics. There is no clashing in this respect, but it is simply a belief that we can be more effective in this area.

Mr. SCHWABE. But insofar as you emphasized preventive medicine, are you not getting into the same field that they are emphasizing?

Dr. HELLER. We emphasize the desirability of early detection, but we emphasize that it should be through the private physician's office—which the American Cancer Society subscribes to also.

Mr. SCHWABE. That is what I thought, but insofar as you program prevention of disease, you are getting into the field which they emphasize most. Is that not true?

Dr. HELLER. Yes, sir. Of necessity we believe in prevention. And, the public education is a field in which they have considered themselves preeminent.

Mr. SCHWABE. To that extent then there is an overlapping, of necessity?

Dr. HELLER. Desirable overlapping. Yes, sir.

Mr. SCHWABE. Do they grant fellowships from the funds they raise?

Dr. HELLER. Yes, sir.

Mr. SCHWABE. To the same group of people of like qualifications, ordinarily?

Dr. HELLER. Yes, sir.

Mr. SCHWABE. You say there is no duplication of those fellowships, where you pay the same fellow they do, or something of that sort?

Dr. HELLER. No, sir.

Mr. SCHWABE. That is carefully worked out and sufficient caution is taken so that that does not occur?

Dr. HELLER. Yes, sir. As a matter of fact, I believe, as someone stated earlier, there has been a demand—a sufficient demand for fellowships to the point that we are able only to supply support to about one-fourth of the people who satisfy us that they have the qualifications that are necessary and desirable. The American Cancer Society has fewer fellowships than we do. Therefore, the demand is still not met for the people who have the qualifications.

Mr. SCHWABE. Do you furnish any of your overflow or waiting list, so to speak, to them?

Dr. HELLER. Yes, sir.

Mr. SCHWABE. And do they furnish you with any that they think are people whose qualifications should demand serious consideration at your hands?

Dr. HELLER. Yes, sir. Quite often they refer to us names of individuals who have come in too late for them to consider, and they believe them to be so good that they should be considered at the time our group meets. We have had many excellent men who have been referred to us through that mechanism.

PRIVATE ORGANIZATIONS WORKING ON CANCER

Mr. SCHWABE. Is there any other private organization or group in the field of cancer research that plays a prominent part, such as the American Cancer Society?

Mr. FOGARTY. The Damon Runyon Fund.

Dr. HELLER. There are several others, Mr. Schwabe, which are of importance but do not have the same size in the field. The Damon Runyon Fund is perhaps the best known one of them which, in effect, is administered by and through the American Cancer Society.

Mr. SCHWABE. They come in through the same operation?

Dr. HELLER. The administration of that fund is through the American Cancer Society.

Mr. FOGARTY. The Sloan-Kettering Institute.

Dr. HELLER. The Sloan-Kettering Institute is one of the recipients of the American Cancer Society, the National Cancer Institute, and the Damon Runyon fund. There are one or two others, such as the Jane Coffin Childs and the Donner Foundation. There is a Stewart Foundation here in Washington, which is much smaller.

Mr. SCHWABE. Do they nearly all go through the American Cancer Society to have their activities promoted?

Dr. HELLER. None, except the Damon Runyon fund. Then the smaller organizations that inquire of us as to the desirability of certain applications, and ask us, from the experience we have had and knowledge of investigators as to whether or not these projects are apt to be good projects.

Mr. SCHWABE. The fellowship applicants and scholarships also?

Dr. HELLER. Yes.

Mr. SCHWABE. And occasionally they finance them, do they not?

Dr. HELLER. Yes, sir.

SMOKING AND TOBACCO AS CANCER CAUSES

Mr. SCHWABE. In reference to the question Dr. Hedrick propounded awhile ago as to cancer that might be associated with excessive smoking, and as to whether smoking caused it or not, is it not true that it is frequently thought by those who have made a serious study of cancer of the mouth or the throat that perhaps the heat from the cigar, or pipe, or cigarette, may have had more to do with producing the cancer, if the smoking was the cause of it, than perhaps anything else?

Dr. HELLER. Yes, sir. That is quite correct, Mr. Schwabe. There was, 20 or 30 years ago, quite a profound feeling among medical people

that pipe smoking was definitely deleterious, and unmistakably many cancers of the lip particularly resulted from pipe smoking, which primarily arose through irritation and heat. The heat, apparently, while it may be some factor in cancer of the lung, apparently is not the major one.

Mr. SCHWABE. It is too remote there, perhaps.

Dr. HELLER. Yes. We do not know whether or not it is the nicotine, or smoke, or some other chemical.

Mr. SCHWABE. I think that is all I have, Mr. Chairman.

Mr. MCGRATH. If I recall it correctly, a year or two ago there was some testimony that there was a survey being made of that question of smoking, and a lot of money was coming from the tobacco interests. Whatever happened to that?

Dr. HELLER. My information is that the tobacco interests have been very interested in this particular problem as one would expect from their stake in it; and that at present, although it is not officially known, I am informed that the tobacco companies are getting together and approaching it very seriously and earnestly in the form of perhaps having a foundation which would subsidize workers who are particularly interested in this field to get at the possible cause of lung cancer from heavy cigarette smoking.

Mr. MCGRATH. Have they done anything actually as yet? They were talking about it 2 years ago.

Dr. HELLER. To my knowledge—and I think that we would probably hear about it—nothing organized has happened.

Mr. DENTON. You spoke about the increase in cancer. Is it an actual increase, or has it just come about because of better methods of diagnosis in existence now?

Dr. HELLER. I think that is a little of it. There are more people now. We have approximately 151,500,000 people in the United States. We are an older age group. For instance, 25 years ago fewer than 1 out of 5 were 40 years of age and older. Now about 1 out of 4 are 40 and over, and 25 years from now 1 out of 3 will be 40 and over. We are older population, and there are more of us. Our diagnostic procedures are getting better. So, it is very difficult to determine and state unhesitatingly that cancer is on the increase or conversely on the decrease. There seems to be reason to believe that the cancer of the lung is actually on the increase, but not one is prepared to document that completely.

Mr. SCHWABE. Will you pardon me? I have one more question.

Dr. HELLER. Yes, sir.

EXTERNAL CANCERS

Mr. SCHWABE. External cancers, of course, have not been touched upon by your testimony to any considerable extent. There have been found cures for most of them, have there not?

Dr. HELLER. That is correct, sir.

Mr. SCHWABE. And today, especially if detected in time, there is very little likelihood of death resulting if the patient goes timely to a competent physician who can administer the right treatment?

Dr. HELLER. That is correct, Mr. Schwabe. We know from experience and records that about 95 percent of skin cancers can be cured, as you say, by going early to a competent physician.

Mr. SCHWABE. That is correct.

Mr. HEDRICK. Most of the cases can be cured by X-ray.

Dr. HELLER. Frequently they can.

Mr. SCHWABE. That is the usual method.

Mr. HEDRICK. How about radiation?

Dr. HELLER. Yes, sir. They are treated with surgery and radiation. Some men prefer one, and some another, and if treated early it works perfectly well either way. Some prefer a combination.

Mr. HEDRICK. What do you hope to accomplish in the way of treatment of cancer with isotopes?

IODINE ISOTOPES

Dr. HELLER. As you perhaps are familiar, the use of an isotope of iodine—iodine 131—apparently selectively goes to the thyroid tissue. If there is a cancer of the thyroid which has spread from there, the iodine definitely will go to that portion.

Now, the big proposition is to get the situation to the point where the isotope is in such concentration that it will destroy the cancerous tissue and the thyroid cancer tissue and, of course, not injure the normal tissue. That looks better on paper than it has worked out practically, and it is true of certain other isotopes of reasonably high energy. The field is being studied, as you can appreciate, intensively and almost exhaustively, but no one is in a position to report unequivocally that it is a weapon in the treatment of cancer yet.

Mr. HEDRICK. I understand they have been doing a lot of work at Walter Reed on that.

Dr. HELLER. Yes, sir. They have.

Mr. HEDRICK. What have their results been?

Dr. HELLER. I am not too familiar with all the work there. I know they are working with iodine 131 in cancer of the thyroid. They have also been working with iodo flourescein in cancer of the brain, and have also been working with carbon 14, which is more basic research than actual relief to the patient. We have to establish basic guideposts in this before they can do the things they hope to.

COORDINATION OF FEDERAL AND PRIVATE GRANTS

Mr. BUSBEY. Doctor, what coordination is there between your grants to various medical and dental schools and the grants of the American Cancer Society?

Dr. HELLER. There is a coordination, Mr. Busbey, in this respect: Not only am I one of the directors of the American Cancer Society, but I am on three of the committees of the American Cancer Society, one of which makes grants. I am on the medical and scientific committeee, which passes upon grants to medical schools and to fellowship applicants. So that I am in a position to take back appropriate medical information to our staff and, in turn, American Cancer Society officials are in close touch with us. In fact, some of their professional people are on our committees. Therefore, we are able at any given time to know exactly what schools are participating, and what applications are in.

Mr. BUSBEY. For instance, if a grant of $50,000 from the Damon Runyon Fund is to be given to a medical school, does that have to go before a board of the American Cancer Society?

Dr. HELLER. Yes, sir.

Mr. BUSBEY. That is all, Mr. Chairman.

Mr. FOGARTY. Do you have anything further to add, Doctor?

Dr. HELLER. No, sir.

Mr. FOGARTY. Are there any further questions from any members of the committee?

Dr. HELLER. Thank you and the committee.

Mr. FOGARTY. Thank you, Doctor.

THURSDAY, MARCH 1, 1951.

NATIONAL HEART INSTITUTE

WITNESSES

DR. C. J. VAN SLYKE, DIRECTOR, NATIONAL HEART INSTITUTE
DR. NORMAN TOPPING, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH
DR. PALMER DEARING, DEPUTY SURGEON GENERAL

NATIONAL HEART INSTITUTE

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$10,725,000	$14,750,000	$10,150,000
Transferred to "Salaries and expenses, Public Health Service" pursuant to Public Law 583	−50,000		
Adjusted appropriation or estimate	10,675,000	14,750,000	10,150,000
Applied to contract authorization		−5,346,876	
Contract authorization	5,350,000		
Total available for obligation	16,025,000	9,403,124	10,150,000
Unobligated balance, estimated savings	−253,415	−3,124	
Savings under sec. 1214		−550,000	
Contract authorization not required for obligation	−3,124		
Obligations incurred	15,768,461	8,850,000	10,150,000
Comparative transfer from—			
"Operating expenses, National Institutes of Health, Public Health Service"	84,923	200,000	
"Operating expenses, National Cancer Institute, Public Health Service"		200,000	
Comparative transfer to "Control of communicable diseases, Public Health Service"	−76,300	−45,600	
Total obligations	15,777,084	9,204,400	10,150,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Grants:			
(a) Grants to medical schools and other institutions and to individuals for research and training:			
(1) Research projects	$3,880,508	$4,709,000	$4,900,000
(2) Research fellowships	318,209	321,000	300,000
(3) Construction of research facilities	6,059,000		
(4) Expansion of teaching of medical subjects relating to heart diseases	[1] 675,460	[1] 737,876	741,000
(5) Training stipends	[1] 161,148	[1] 150,000	150,000
(b) Grants to States for detection, diagnosis, and other control activities	1,769,842	1,700,000	1,500,000
2. Direct operations:			
(a) Research	1,356,090	1,753,600	1,878,000
(b) Other direct operations:			
(1) Review and approval of research and training grants	57,855	75,657	75,500
(2) Technical assistance to States	379,715	405,040	375,000
(3) Administration	231,381	240,103	230,500
Total funds for program performance	14,889,208	10,092,276	10,150,000
Adjustment for obligations incurred in advance of program performance	[1] 887,876	[1] −887,876	
Total obligations	15,777,084	9,204,400	10,150,000

[1] Some of the obligations for teaching grants and training stipends were incurred 1 year in advance of program performance. By means of the adjustment line shown in this schedule, the amounts by activity reflect actual performance levels for each year.

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
Total number of permanent positions	326	368	367
Full-time equivalent of all other positions	25	23	11
Average number of all employees	248	338	331
01 Personal services:			
Permanent positions	$886,124	$1,441,163	$1,479,724
Part-time and temporary positions	124,536	88,840	52,905
Regular pay in excess of 52-week base	3,159		5,572
Payment above basic rates	2,522	6,678	4,850
Total personal services	1,016,341	1,536,681	1,543,051
Deduct charges for quarters and subsistence	1,440	2,700	2,700
Net personal services	1,014,901	1,533,981	1,540,351
02 Travel	60,152	71,300	72,110
03 Transportation of things	11,033	6,415	5,897
04 Communication services	8,097	13,880	13,130
05 Rents and utility services	3,713	5,900	5,900
06 Printing and reproduction	13,060	14,480	13,480
07 Other contractual services	446,355	433,165	517,235
08 Supplies and materials	163,139	168,847	168,847
09 Equipment	304,591	225,070	219,860
11 Grants, subsidies, and contributions	13,752,043	6,730,000	7,591,000
15 Taxes and assessments		1,362	2,190
Total obligations	15,777,084	9,204,400	10,150,000

Mr. FOGARTY. Dr. Van Slyke, do you have a statement?

GENERAL STATEMENT

Dr. VAN SLYKE. Mr. Chairman, I do not have a prepared statement but I do have some remarks I would like to make to you and your committee, sir.

First, I will point out that the National Heart Institute was established in the summer of 1948 with certain responsibilities which took

cognizance of the size of the heart-disease problem. As I reported to this committee previously, and you are well aware, sir, the heart disease problem is No. 1 killer in this country. It affects probably between 9 and 10 million of our people and it is an ubiquitous disease condition which we have to contend with on a national basis.

RESPONSIBILITIES OF THE HEART INSTITUTE

The Heart Institute has three major responsibilities. First, we have the responsibility for conducting our own internal research program with our scientists. We have a program of research which encompasses the heart-disease field. Secondly, we have a participation in the disease-control program with the State official health agencies and in this field we are interested in the supplementation of clinic activities and in the refresher courses for physicians, in lay education and activities of that sort.

The third activity of the National Heart Institute and one which takes the bulk of the funds is the support of research and training activities for nongovernmental people in nongovernmental institutions. That is a program of research project grants and training of research fellows in heart-training centers.

NATIONAL BLOOD PROGRAM

I think, Mr. Chairman, the committee might be interested in a brief run-down of some of the things that the Heart Institute is interested in. I think particularly today we might pause to consider the formed blood elements program. I have assumed, sir, that you will take up the individual items that they will come up for consideration later, but we have a responsibility in the blood program for supporting research in the formed blood programs. Dr. Sebrell mentioned to you and your committee that $600,000 is going for this purpose this year. We hope to be able to carry this program forward for next year. We know that whole blood will not keep for more than about 21 days. We know that whole blood is much to be preferred to any of the constituents of blood, so our research concern is how can we protect the various constituents of blood so that we will in effect be able to give a person who needs whole blood the benefit of whole blood without having it immediately available as such.

If we assume that my finger is a tube of blood, half of that tubeful of blood is really a fluid, and half of it is a solid portion. In the fluid portion we find three things: We find water, we find salts such as sodium, iron, and we find proteins, blood proteins. These proteins are, you might say, something like sponges. They keep the water from flowing out of the blood into the tissues. The blood vessels, capillary walls, are not in any way solid; they are pretty open. So the proteins in the blood keep the water part from flowing into the tissues, a condition which may obtain in shock. The other half of that tube of blood is the solid portion of the blood and it, too, has three parts. It has the white cells which fight infection in the body. And those are the cells that are destroyed by radiation blast. For instance, an atomic radiation might destroy those cells particularly. Secondly, it has red cells whose primary and probably total function is to carry oxygen around the body to supply it with fuel. The third

constituent of the solid part of the blood are platelets which have to do with the clotting of the blood.

If we are going to provide the most useful tool for civilian and military defense, it is obvious that we must find new and better ways of protecting whole blood or its solid constituents so that we can bring them to bear upon the problem, to eliminate the 3 weeks' dead line beyond which whole blood cannot be used. I might say that our research has already paid off pretty well because plasma, the dried plasma which is in use and was used during the last war, from the liquid part of the blood, the protein portion from the liquid part of the blood, we now through research have been able to break down the red blood cells and get two molecules of globin which is a type of protein out of the red cell portion which was formerly discarded, just poured down the drain so that we have by research gotten that much already.

Mr. FOGARTY. What does that mean?

Dr. VAN SLYKE. That means that I described, Mr. Chairman, the protein part of the blood in the fluid part. These proteins actually are sponges. They keep the fluid within the blood vessel. Now, instead of just having a sponge over in the fluid part we have been able by breaking down the protein in the solid part to put two more pieces of sponge into the system. So in case of blood loss, in case of shock, we have this additional protein which we can put back into the blood. A very valuable advance, I would say, sir.

ACTIVITIES IN THE FIELD OF SHOCK

Next, we are interested in supporting and working in the field of shock. The condition where the blood vessels dilate in the person and the person to all intents and purposes in many instances bleeds to death within his own body because of lack of tone. We are working on this shock which is expanded into peripheral vascular disease. Incidentally, it leads us into the effect of radiation on the peripheral vessels at the surface and in the distant portions of the body. We have expanded our interest in activities in this field at the request of the Atomic Energy Commission.

Another thing which I think the committee would be interested in, sir, is the work we have done and are continuing to do in the field of analgesics in relation to shock, in relation to heart disease. We face this problem in knowing that the person with heart disease has to have carefully selected anesthetic type of drug, or if they are injured, the wrong type of analgesic may be not as favorable to protecting his heart as others. So we are working in that field.

We also are interested in prolonging analgesia so that if transportation of the wounded is necessary, we will have a compound which will make the transportation less painful.

ANTICOAGULANTS

We are working in the field of anticoagulants. I think you and your committee have all read at one time or another about dicoumerol which came first from spoiled alfalfa substance, which keeps the blood from clotting. If I may digress for a moment, when you get a condition known as heartstroke or coronary thrombosis, there is a little

clot which forms in the vessels of the heart wall and unless that kills the person immediately, the clot will tend to either stay the same and the patient will get well or the clot will increase in size and have a disastrous effect. With the anticoagulants, things like dicoumerol and the newer drugs, paritol, tromexon we are able to arrest further clotting; we are able to stop it where it is and give nature a chance to correct this condition. In experimental tests which we have made, experimental projects which we conducted in cooperation with the American Heart Association, it is quite evident that the use of these compounds properly, early, and for a long enough period of time, saves many, many lives. Of particular importance is the fact that these types of compounds and, in relationship to the type of compound which I will mention later, may have a tremendous influence on frostbite. We are particularly interested in that, Mr. Denton, because of the type of injury which our soldiers have been getting in Korea because of the cold over there. I might at this point break in and speak then about this other compound we have.

COMPOUND RELATED TO PROCAINE

There is a compound related to procaine, a substance used to deaden pain when they pull your teeth, or some so-called local anesthetic. By chemical change, a rather simple chemical change in that compound, we have one of the finest agents that we know of for arresting a certain type of disordered heart beat, ventricular tachycardia. It can also be treated with quinidine or quinine, but who knows if there is ever going to be a serious interference with the supply. So that what we have now is something which not only supplements that but is probably as good or better and it is this compound that I speak of which was developed by one of the staff members of the National Heart Institute. It is this compound which we believe or at least are hopeful that if we alter it chemically a bit further, it may act in such a way on the vessels of the cardiovascular system as to have a very beneficial influence in frostbite.

WORK RELATED TO ADVANCING AGE OF CITIZENS

Let me stress, sir, that we have not done this yet. This is preliminary. I would not want to be held for this, but I am trying in a rather informal way to give the committee a bird's-eye view of the type of activities which we are conducting. We are also working in the field of gerontology because of the advancing age of our citizens, as Dr. Heller spoke about yesterday. We have quite a problem in knowing how best to keep these people happy and actively producing and so our work in this field is related with the basic work in which we are engaged. Also it has to do with the evaluation of their work capacity. We cannot recommend that these older people take on certain jobs if it is going to be serious, if it is going to affect them seriously. So we must go into that and continue our activities in that field. We are concerned with therapy of heart disease and of high blood pressure.

We are searching for compounds for better understanding of what causes high blood pressure and what can we do about it. What are the substances found in the blood of people who have high blood

pressure? What are these substances? Are they found in people who have normal blood pressure; and are there differences? We have gone quite a long way along this line and our work in the chemical line trying to develop a new compound. I think as an aside, I might mention that in the search for compounds to affect high blood pressure favorably, banthine for so many people seems to be successful in the treatment of stomach and duodenal peptic ulcers where around 70 percent of the cases there you will see pain and symptoms disappear overnight. That was an offshoot of our attempt to get a drug to treat high blood pressure. I think it also spells out the close interrelationships of the various research programs which you gentlemen have heard and will hear from time to time about. You cannot separate heart completely from cancer, from mental health in any way, but there is a general separation and that is what we are speaking about here. I would like to tell you, if I am not taking too much time, a little something about some of the work we are doing with ACTH and cortisone in the treatment of rheumatic fever.

ACTH AND CORTISONE

In cooperation with the American Heart Association and with the Medical Research Council of Great Britain, we have set up a Nation-wide rather extensive cooperative research program which has two purposes. It is to test ACTH and/or cortisone in the treatment of rheumatic fever and what we want to find out is this: Does ACTH and/or cortisone favorably affect the course of rheumatic fever? I can answer that in a preliminary way and say that in early cases of rheumatic fever, its responses are nothing short of miraculous, dramatic. Almost overnight there is a cure in some of the acute cases, something we never even dreamed of before.

The second thing we want to find out from this experiment is, does the use of ACTH and cortisone in rheumatic fever prevent the development of rheumatic heart disease. As you gentlemen know, you do not get rheumatic heart disease unless you have had rheumatic fever and you probably do not get rheumatic heart disease from the first attack of rheumatic fever but from subsequent attacks. So we, with our allies in this field, in this cooperative endeavor, are searching desperately for answers to this. There are serious answers as the records which I have made available to me indicate, that there were approximately 40,000 men discharged from our Armed Forces of the last war because of rheumatic fever. Now, if we assume that it costs the Government in time for each case at least $10,000 a case, and I think that is a pretty low figure, there is $400 million which that alone is going to cost the Government. To continue on rheumatic fever, I reported to this committee last year and we are still carrying on the program in the use of pencillin and the sulfonamides in the prevention of recurrent attacks of rheumatic fever. If this project be carried on, there is no doubt that it is going to save many many cases of rheumatic heart disease from developing.

BLOOD-VESSEL BANKS

We are also interested in supporting work in blood-vessel banks and that, of course, is of particular importance to industry where injuries take place and to the military where the vessels are wounded

in such a way that if they are to continue to carry blood, there must be a repair part put into the line. We have vessel-bank research going on and it looks hopeful; we are able to keep blood vessels for quite a period of time and put them into other human beings.

INSTRUMENT DEVELOPMENT

We have a section on instrument development. The electro-kymograph which some of you or your committee may have seen, is an example of instrument development, the tying together of the fluoroscope, the electrocardiograph, and the radio tube which is almost infallible as a detector of light source. It is the kind of tying these things together which makes the electrokymograph possible and which gives us a tool, though not fully evaluated to date by any manner of means, gives us a tool which we reasonably feel will aid in the control of heart disease eventually, particularly on the diagnostic side.

Mr. FOGARTY. Just what improvement is that over the electrocardiagraph?

Dr. VAN SLYKE. Mr. Chairman, the electrocardiagraph measures not the motion of the heart muscle itself but measures the electrical current, the electrical excitation that passes through the heart muscle before it ever moves. Now, in the normal person, the heart muscle follows this electrical excitation and the electrocardiagraph, to be sure that I am not misunderstood, the electrocardiograph is an extremely important instrument but it does not measure muscle action of the heart per se. It measures these electrical impulses. As an example of the difference between the two, I might point out that if a section of the heart muscle, of the heart wall is affected by a thrombus so that it loses its ability to contract when the heart squeezes down, that part that is weak will balloon out. So it is a paradoxical relaxation of the heart wall over the diseased area, and when you shoot through with the electrokymograph you may not see it here but you turn it to the side and you may see this paradoxical expansion of the heart wall when the heart is totally contracted.

Mr. FOGARTY. Which would not be recognized on the electrocardiograph?

Dr. VAN SLYKE. Not as much, no, sir; we would not be able to pick it up. We would know there was difficulty but we get additional information through the electrokymograph.

PROTEIN-FAT MOLECULES

I would like to mention another activity in which we are very much concerned and that is the role of protein-fat molecules in the blood and their relationship to the development and hardening of arteries and to the development of coronary thrombosis. Some of you may have read an article in Collier's some few months ago entitled, "Are We Eating Our Way to Arteriosclerosis?" To put it in the simplest terms, blood contains newly discovered fat-protein molecules of a certain size. They are really giant molecules. The theory which is the concept which is developed is finding these molecules, that these molecules either because—they either cause hardening of the arteries of a certain type, arteriosclerosis, which leads to coronary thrombosis, or that they are an indicator. This is a very complex, difficult problem

and it is going to be hard to answer. We have a number of laboratories around the country working actively on this problem and if there be—I stress that—if there be a relationship between these giant fat-protein molecules in the blood and the development of this arteriosclerosis, this type of hardening of the arteries, and coronary thrombosis, then we will have to redouble our efforts in the therapeutic field which is in this field preventive in the sense of, is there something we can do in the way of dietary advice? Is there something we can do in the way of food supplements, such as the vitamin class? I do refer to the vitamins only as illustrative because I do not think they will do it but it might be something of that order; or, is there some sort of a compound which we can prescribe which will tend to have the body metabolize these fat particles differently so that they do not pile up. I happen to know from testing that certain people you think might have, people inclined to be a little obese might have more of these than a thin person, each person is apparently a law unto himself and once these particles are present in the blood they tend to remain the same regardless of ordinary changes in diet.

I think, Mr. Chairman, I have covered some of the high spots of our activities. I think the thing that I should like to particularly stress is that we are not unconscious of the international situation and we are not attempting to carry on blandly a business-as-usual program. But the research, the basic research which serves as the background for all of these and other new developments in the field of medicine is something which must go on and we are going to as far as we are able to, to carry it on; but we are shading it to things as much as we can, the things of immediate defense importance. We cannot, of course, postpone work and then catch up with it later simply by intensifying our efforts because the periods of observation are such that we cannot do that.

I shall be pleased, sir, to expand any of these matters further or go into the specific items which we are appearing before this committee to justify.

PEOPLE AFFECTED AND DEATHS CAUSED BY HEART DISEASES

Mr. FOGARTY. Doctor, you said about 9,000,000 people are affected with some disease of the heart at the present time in this country.

Dr. VAN SLYKE. At least 9,000,000.

Mr. FOGARTY. How many die every year because of heart disease?

Dr. VAN SLYKE. The last complete records indicated that there were 647,000 deaths from heart disease, a figure now approximating something over 700,000 deaths a year. Now, I think I should stress in this connection, Mr. Chairman, that these deaths are not limited to the aged; that, if I recall the figures exactly—and may I correct this later if I am incorrect?—it seems to me that 35 percent of all the deaths due to heart disease occurred in the 35-to-49-year age group in 1947. You see that is the period of life in which the people who had rheumatic fever as children have gotten to an older period of life. Many of them have married. The women are in the child-bearing age. They have developed rheumatic heart disease, and it is a pathetic fact that, shall we say, in the fullness of life so many of these people have had their hearts give out and they are gone.

Now, the time to prevent those things is when rheumatic fever strikes. That is the reason we are so interested in ACTH and cortisone and penicillin and the sulfonamides. If we can prevent rheumatic fever from recurring, we can prevent rheumatic heart disease, which is the killer.

Mr. FOGARTY. What is the leading cause of death of these people who die of heart disease, such as hardening of the arteries?

Dr. VAN SLYKE. It is hard, Mr. Chairman, to break that down accurately in terms of figures, because when we speak of heart disease you notice we usually refer to it as cardiovascular disease. In the center you have the pump and the pipeline system, and the return system and the kidneys are in this pipeline system. The vessels are part of the total system. It those muscles clamp down because of infection or because of spasm, you get high blood pressure; if they clamp down, not only does the kidney go bad but the heart gets bigger in an attempt to shove blood through this system. So, we must consider the cardiovascular system in its entirety.

Now, in answer specifically to your question, I can only say I cannot give you a completely accurate answer. It is my impression, however, sir, that about a third of the cases are due to hypertension, to high blood pressure; a half of them are due to hardening of the arteries, and the most of the balance of the cases are due to rheumatic fever.

Mr. FOGARTY. Hardening of the arteries comes under coronary thrombosis?

Dr. VAN SLYKE. That is right.

EFFECTIVENESS OF DICUMAROL AND TROMEXAN

Mr. FOGARTY. You have made some advance in that field, though—have you not?—in the use of drugs like dicumarol and others.

Dr. VAN SLYKE. We feel we have made very definite advances, Mr. Chairman. As I pointed out in our cooperative work with the America Heart Association, we have shown very definitely that we can save many many lives by the use of dicumarol in preventing the extension of the clot which forms in coronary thrombosis. That is pretty well documented. Now, dicumarol has the disadvantage that it must be given for about 48 hours before it has any effect; and, after we stop giving it, it continues to have an effect for 48 hours. Anything as powerful as dicumarol at keeping blood from clotting, if you are not careful you will give so much that there will be bleeding which you will have a very hard time to control. So, we get to tromexan and the new drug which can be taken by mouth which has its major effect pretty well within 18 to 24 hours. That is very important, because once you have passed a dicumarol into the system you know that you have got to put up with that for the next 48 hours, and it may be too much of a good thing. You may be running into bleeding. So, it is awfully important now. We have other drugs or other new compounds which act even closer than that. Again we do not want to work too close because then you might have patients with blood too thin, so we have got to get a balance. We think tromexan is a pretty fair drug on that score, and it is just going into wholesale or large-scale testing now.

Mr. FOGARTY. Is it safe to say that, because of the discovery of that particular drug, people are walking around alive today who perhaps without it would not be?

Dr. VAN SLYKE. I am positive, Mr. Chairman, that that is an absolutely accurate statement.

Mr. FOGARTY. That was developed through research?

Dr. VAN SLYKE. Yes, sir; only through research.

PSYCHOLOGICAL EFFECTS OF HEART DISEASE

Mr. FOGARTY. Now, I meet a number of people who have had heart attacks of some sort or another, and most of them seem to give up hope as soon as they have one of these attacks. They do not seem to think there is any future for them; that they are going to be bedridden for the rest of their lives and are just waiting to die.

Dr. VAN SLYKE. Well, Mr. Chairman, I think that if the truth of heart disease is known, as it is known there will be less and less of that. Not to be pedagogical, but heart disease is a whole series of diseases and if we limit it to this now, in this consideration, to those who have a coronary thrombosis, it probably is not as bad and bleak, this outlook, as we once thought, because if they take care of themselves, if they are overweight and they reduce, if they adjust their method of living, if they keep faithfully under the doctor's care and do what he tells them to do, there is no reason why the majority, not all, because we will have sudden deaths regardless of what advice is given or what they do, but the majority of them can continue to live on for several years. At the turn of the century this coronary thrombosis was still not discovered, and we have only known it now less than 50 years, although it was described way back, I think, by Pope Leo XII, as "this sudden death" a good many centuries ago, and he ascribed it to the heart. But medically, in terms of current medical knowledge, we have only known about this type of heart disease for the last 50 years. A relatively few years ago we used to think that an attack like this meant death and the patient was destined to bed and invalidism from there on out. Within the past few years there has been a more enlightened point of view, and our records indicate that that is fully justified, because we have many patients who are alive 20 and 25 years after their attacks.

VALUE OF MEDICAL RESEARCH

You mentioned, Mr. Chairman, research. I would stress what I have already said again, and that is that advances in this field, advances in the medical field for better diagnostic, for better preventive measures, is only going to come through research. There is no other way. It is a long, painful, expensive process, but there is just no substitute for it.

Mr. FOGARTY. I believe that; but it is very difficult to get some Members of Congress and some people outside of the Congress to believe that research is doing any good at all in the fields of heart, cancer, and a number of other things. It seems year in and year out, when we attempt to do something along this line, that we run up against the same old answer, "Well, it is money being thrown down the river," or some other place.

Dr. VAN SLYKE. Mr. Chairman, I am sorry I am unable to understand that point of view. It is probably because professionally we are so closely tied to these things we have a different outlook than people who are not so closely allied to the field. But let us just take a case of rheumatic fever. I have mentioned that today ACTH and/or cortisone, which, for certain cases particularly, the acute cases of rheumatic fever can be cleared up almost overnight.

Mr. FOGARTY. Which could not have been done 2 or 3 years ago?

Dr. VAN SLYKE. No, sir. The only reason we have ACTH and or cortisone today is because it has an effect on a lot of other things. The only reason we have those things today is because of research. It started out as basic research into the physiology and the function of the adrenal glands. There was some tie-up, as you have been told, I am sure, the tie-up that people first noticed that there was a remission of symptoms of a type of arthritis when a woman became pregnant. Those patients, as soon as they became pregnant, became better. Well, scientists were curious to know why did they get better, what happened to the metabolism of these people. It is this basic, fundamental research work which has led to people being alive today.

Dr. TOPPING. Mr. Chairman, in a year or two, ACTH will be a common thing, we know, and people will forget that years went into its development—except the people who worked on it. Actually, the first definitive work was done by Dr. Evans at the University of California in 1924. His observations at that time were that a crude extract of anterior pituitary gland caused enlargement of the adrenal gland. It took from 1924 until 1949 for all of the fundamental work which led finally to the purification of ACTH by the Armour laboratories. They built their work on the fundamental work that was done in the universities, in the medical schools in something over 20 years—Dr. Kendall at the Mayo Clinic, Dr. Rothstein in Switzerland, Dr. Herbert Evans in California, Dr. Collip in Canada—all played a very important part in that development. It took 20 years of basic research that started with the injection of a crude pituitary extract into a rat and the observation that the adrenal gland was enlarged. But that all will be forgotten in 2 or 3 years, because ACTH will be a very common thing and no one will remember except the people in the scientific field who worked during those years that all of this was done through research for a 20-year period.

Mr. FOGARTY. Similar to penicillin, streptomycin, aureomycin.

Mr. DENTON. What gland is that you are talking about?

Dr. TOPPING. I mentioned two glands. I mentioned the pituitary gland, which is located in the base of the brain; and I also mentioned the adrenal gland, which is located near the kidney. Those two glands are very closely related in function.

Mr. DENTON. What do they have to do with the heart? I do not get the connection.

Dr. TOPPING. Dr. Van Slyke mentioned that ACTH and cortisone are the two substances that have a definite effect on acute rheumatic fever, which affects the heart. Either of those two substances, for some reason unknown at the moment, have a tremendous influence on the course of acute rheumatic fever. No one knows why. One of the things that we feel we must do is the basic studies that will elaborate upon that particular phenomenon as well as its effect on arthritis, and by doing the basic work, finding out why these work

well, will at the same time increase our knowledge to build upon 10 and 20 years from now. That is the way progress is made in science.

Dr. VAN SLYKE. Mr. Chairman, that is the reason that I stressed in my testimony to your committee the fact that you cannot through intensity of effort make up for lost time. I think that is awfully important that we do not. I do not know how else to put it. We do not want to let Joe Stalin take a quick trick on us. That is just about the spot that we face now.

INTERNATIONAL HEART CONFERENCE

Mr. FOGARTY. Doctor, the first International Heart Conference was held in Paris last fall; was it not?

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. Did any good come out of that?

Dr. VAN SLYKE. Yes; I think that a tremendous amount of good has come out of it and will continue to come out of that conference. It was the first time that the cardiologists and people interested in the heart field had a chance to get together and exchange views and exchange experiences. It was not merely the formal reading of the papers, important though that was, since they will be or are in bound form and available, but it was the interchange between people working on related problems, the things that they do not want to put into print because they are preliminary and provisional. I think as a result of this catalysis of thought, that the International Cardiological Congress will pay big dividends. Science has no national boundaries. I speak about ACTH and cortisone again, since we were interested in the work of Dr. Houssay of Argentina, as he is an authority. He has done an awful lot to promote interest in this field. I am just using that as an example. Exchange of thought and ideas is one which I am sure will continue to flower for a long time.

BEST RESULTS FROM EARLY TREATMENT

Mr. FOGARTY. Now, I suppose millions of people are walking around today with heart trouble of some kind and they do not know it.

Dr. VAN SLYKE. That is very true, Mr. Chairman.

Mr. FOGARTY. What are we doing about that?

Dr. VAN SLYKE. Well, our chief attempt to overcome that is through our cooperation with the American Heart Association in working with their local units and with local health departments to alert people to the need for regarding symptoms properly so that if there is any doubt in their mind they can go get checked up. We want them to get to their physician as soon as possible. There is no use in calling out the fire department when there is nothing left but charred rafters sticking up. If there is any good to be gained from medical treatment, and I assure you there is the best chance the patient has is to present himself as early as reasonably possible to the physician and to pay attention to his advice and guidance. We work, as I pointed out in my opening remarks, one of our important jobs is participation in this program with people and through this committee and Congress for

the present year we had $1,700,000 available to the States to assist them in their heart-disease-control programs. As I pointed out earlier, two of the chief functions of the use of these funds is to aid in the earlier diagnosis, better diagnosis, and cure of patients through refresher courses for physicians.

I do not know, Mr. Chairman, whether you are acquainted with the Connecticut plan or not.

Mr. FOGARTY. They are right next door to us up there but I am afraid I am not.

Dr. VAN SLYKE. It is something that developed in a section of the country in which probably you have the greatest acquaintance and that is the physicians there bring their problem, diagnostic heart problem cases, if they choose to, to these clinics which were supplemented and assisted by these funds; not only does the patient come there for better diagnosis by cardiologists who participate cooperatively in this program but the physician himself comes along so not only does the patient get a better diagnosis but the physician himself comes along and gets refresher training. It is working out extremely well.

Mr. SCHWABE. Who maintains it?

Dr. VAN SLYKE. It is supported jointly by the Federal and State funds which go into it and in cooperation with the American Heart Association State and local chapters.

Mr. FOGARTY. I had a chance in Rhode Island to investigate the local cancer society last year. They are making plans with management and labor to go into some of the larger plants and show some of these films on early detection of cancer and give them some examination in cooperation with the medical society. Is any of that work being done in the heart field?

Dr. VAN SLYKE. Only to a very limited extent, Mr. Chairman. We have conducted certain activities in the so-called multiphasic screening line but we view those as purely experimental activities. I think it was brought out in the committee testimony yesterday that even with the most careful examination there will be cases of heart disease, cancer, or other things you do not detect. We are much concerned that this be viewed as an experimental thing not only because our methods are not quite as accurate, not accurate enough for that type of application, but we have to guard against, on the one hand, the fact that these people think they have been examined adequately and assume that they are all right, and on the other hand, that we create too much of an interest in the disease in such a fashion that we produce neuroses. We must have a good balance.

Mr. FOGARTY. Is heart trouble more prevalent in obese people?

Dr. VAN SLYKE. I do not think I can state it is more prevalent in obese people but I can say that if heart trouble develops in an obese person then the heart has got a bigger job to do to push blood around through these additional vessels. I do not know that I can document it as a fact, but some place I read for each pound of fat that is put on, there are probably 4 miles of minute capillaries within that pound of fat, which means that some energy must be used to push blood through those places. So it does add to the load.

FUNDS AVAILABLE, 1951 AND 1952

Mr. FOGARTY. Doctor, you had available in this fiscal year, $14,750,000. Added to that, you have $400,000 transferred from the Cancer Institute for this blood program?

Dr. VAN SLYKE. Yes, sir.

SECTION 1214 CUT

Mr. FOGARTY. You had $550,000 held in reserve by the Bureau of the Budget under section 1214. Where was that $550,000 applied?

Dr. VAN SLYKE. We took $90,000 from research grants; $300,000 from State grants; $145,792 from our intramural research program, and $14,208 from the item called "technical assistance to the States", making a total of $550,000.

CONSTRUCTION OF RESEARCH FACILITIES

Mr. FOGARTY. You are asking for over 10 million dollars which is a decrease of $4,395,000 and a decrease of one position. That decrease of $4,395,000 is practically all liquidating cash for the construction of research facilities?

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. That ends that construction program? It has been ended?

Dr. VAN SLYKE. Yes, sir; that at least postpones the construction program.

RESEARCH GRANTS TO SCHOOLS, INDIVIDUALS, ETC.

Mr. FOGARTY. Now in your research projects with grants to medical schools—before I get into that, is there any difference between the operation of our institute and the Cancer Institute? I mean as to the advisory board and the legislation and the way these projects are approved and training apprenticeships and fellowships are approved?

Dr. VAN SLYKE. No, sir.

Mr. FOGARTY. You operate exactly the same as the Cancer Institute?

Dr. VAN SLYKE. We have a separate council, the National Advisory Heart Council, instead of the cancer group. But I would like to point out, Mr. Chairman, as I heard some of the testimony yesterday, I would like to stress again that these research grant programs are programs which are run by the scientists of this country, that they are run by the scientists and the Federal Government does not place itself in a position of deciding what scientists do or do not do. Any time that we want the best job done we go and get the best people to do it. We have done that in the field of medical research. We have the top, absolutely top flight people in the country who are engaged in helping the Public Health Service do the best it can with the dollars which you make available for this purpose.

Mr. FOGARTY. You show an increase of $191,000 in this project. Are there some new projects?

Dr. VAN SLYKE. Mr. Chairman, the net increase of $191,000 represents a total $200,000 increase in the formed blood elements program, giving a net decrease of $9,000 in ordinary research grants in the heart field.

Mr. FOGARTY. That increase of $200,000 makes $800,000 available for this national blood program.

Dr. VAN SLYKE. $800,000.

Dr. TOPPING. Mr. Chairman, there are at present $600,000 available, $200,000 from the National Institute of Health, $200,000 from the cancer funds, and $200,000 from the Heart Institute. That is in the present fiscal year. This increase to $191,000 would represent $800,000 item in fiscal 1952.

RESEARCH FELLOWSHIPS

Mr. FOGARTY. In research fellowships, it shows a decrease of $21,000.

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. In 1951, you had enough to support 94 fellows at an average of $3,425 a year. In 1952, you are going to reduce that to 88?

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. So that is the reason for the reduction?

Dr. VAN SLYKE. Yes, sir; that is right.

Mr. FOGARTY. Construction of research facilities—that is cash and that is out next year.

GRANTS FOR EXPANSION OF TEACHING RELATED MEDICAL SUBJECTS

Expansion of teaching of medical subjects relating to heart disease, that is the same type of program you have in cancer, isn't it?

Dr. VAN SLYKE. Yes, sir. At the present time our maximum support is $14,000 to 43 of the 4-year schools.

Mr. FOGARTY. How are these schools selected? How many 4-year schools are there?

Dr. VAN SLYKE. Seventy-three.

Mr. FOGARTY. You have selected 43; how were they selected?

Dr. VAN SLYKE. When the Heart Institute was——

Mr. FOGARTY. Will you put in the record those schools that are receiving this financial help?

(The information requested is as follows:)

Teaching grants approved for payment by the National Advisory Heart Council, 1951 funds

Institution	Grant No.	Approved for payment	Principal investigator	Contracting official
University of Alabama	H-542-C	$14,000	Tinsley R. Harrison	Roy R. Kracke.
University of California	H-549-C	14,000	Charles D. Marple	Robert G. Sproul.
University of Southern California.	H-296-C	14,000	B. O. Raulston	B. O. Raulston.
Chicago Medical Schools, Illinois.	H-5002-C	14,000	Aldo A. Luisada	John J. Sheinin.
University of Colorado	H-286-C	14,000	Ward Darley	Ward Darley.
Yale University	H-284-C	14,000	A. J. Geiger	C. N. H. Long.
Georgetown University, District of Columbia.	H-5003-C	14,000	Hugh H. Hussey	Paul A. McNally.
Howard University, District of Columbia.	H-5000-C	14,000	John B. Johnson	Joseph L. Johnson.
Emory University, Georgia	H-271-C	14,000	James V. Warren	R. Hugh Wood.
University of Chicago	H-266-C	14,000	Emmet B. Bay	Wright Adams.
University of Illinois	H-300-C	14,000	Stanley W. Olson	John B. Youmans.
Loyola University, Illinois	H-302-C	14,000	Charles J. Thill	J. F. Sheehan.
Iowa State University	H-245-C	14,000	William B. Bean	Carlyle Jacobsen.
University of Kansas	H-269-C	13,500	Franklin D. Murphy	Franklin D. Murphy.
Louisiana State University	H-234-C	14,000	Edgar Hull	Vernon W. Lippard.
Tulane University, Louisiana	H-534-C	14,000	G. E. Burch	M. E. Lapham.
Mount Desert Island Biological Laboratory, Maine.	H-5007-C	10,000	Warner F. Sheldon	William H. Cole.
Johns Hopkins University	H-260-C	14,000	E. Cowles Andrus	Alan M. Chesney.
Harvard University	H-297-C	14,000	George P. Berry	Edward Reynolds.
University of Michigan	H-5004-C	12,000	Henry F. Vaughan	John A. Perkins.
Wayne University, Michigan	H-239-C	14,000	Gordon B. Myers	Gordon H. Scott.
University of Minnesota	H-290-C	14,000	Harold S. Diehl	W. T. Middlebrook.
University of Mississippi	H-5001-C	8,000	Arthur C. Guyton	D. S. Pankratz.
St. Louis University, Missouri	H-347-C	14,000	E. Lee Shrader	Alphonse M. Schwitalla.
Washington University, Missouri.	H-247-C	8,532	W. Barry Wood	Charles Belknap.
University of Nebraska	H-227-C	14,000	F. Lowell Dunn	Harold C. Lueth.
University of Buffalo, New York.	H-294-C	14,000	Stockton Kimball	Stockton Kimball.
Cornell University Medical College.	H-348-C	14,000	Hugh E. Luckey	Joseph C. Hinsey.
New York State University	H-274-C	13,999	Richard H. Lyons	H. G. Weisketten.
	H-303-C	13,950	Duncan W. Clark	J. A. Curren.
New York University	H-558-C	14,000	Homer W. Smith	Currier McEwen.
Duke University	H-257	14,000	Keith Grimson	A. Hollis Edens.
Bowman Gray School of Medicine, Winston-Salem.	H-344-C	14,000	Harold D. Greene	C. C. Carpenter.
University of Cincinnati	H-244-C	12,500	Johnson McGuire	Stanley E. Dorst.
Western Reserve University, Ohio.	H-5008-C	42,944	Carl J. Wiggers	John S. Millis.
University of Oklahoma	H-273-C	14,000	Roberty H. Bayley	Mark R. Everett.
University of Oregon	H-5005-C	14,000	Howard P. Lewis	W. E. Baird.
Hahnemann Medical College and Hospital, Philadelphia.	H-288-C	14,000	George D. Geckeler	Charles L. Brown.
Jefferson Medical College, Philadelphia.	H-287-C	13,997	Hobart A. Reimann	William H. Perkins.
University of Pennsylvania	H-253-C	14,000	Charles C. Wolferth	William H. DuBarry.
Women's Medical College of Pennsylvania.	H-249-C	14,000	William G. Leaman	Marion Fay.
University of South Dakota	H-262-C	5,000	R. S. Anderson	Donald Slaughter.
Meharry Medical College, Nashville, Tenn.	H-502-C	20,000	George B. Brothers	Murray C. Brown.
University of Tennessee	H-235-C	14,000	Conley H. Sanford	O. W. Hyman.
Southwestern Medical School, Dallas.	H-293-C	14,000	Howard Meyer	W. Lee Hart.
University of Utah	H-250-C	12,500	Hans H. Hecht	A. Ray Olpin.
Virginia Medical College	H-292-C	14,000	Reno R. Porter	W. T. Sanger.
Marquette University, Wisconsin.	H-261-C	14,000	Howard L. Carrell	John S. Hirschboeck.
University of Wisconsin	H-5006-C2	58,600	David E. Green	A. W. Peterson.

Dr. VAN SLYKE. Yes, sir. At the time the National Heart Act was passed, we advised the medical schools around the country about the passage of the act, the provisions of the law and, at the direction of the National Advisory Heart Council, it was reported to them that funds were not available for any of these purposes. But we suggested that they think about the needs, what they could do to improve activities in the teaching of heart disease, a better coordination of the teaching of heart diseases in their institutions and to notify the National Advisory Heart Council as to their needs in this field. This letter very carefully stated that we did not presume to prophesy how much or if there would be any appropriations at all for this purpose. As a result of this rather careful but selective correspondence with the Medical schools, 43 of the schools applied and when Congress did make available $741,000, the National Advisory Heart Council recommended that this amount be divided appropriately between these schools and that has been done. Now, there has been no selection beyond that and since the program has gotten under way, it is very highly recommended by the deans of the medical schools and by the students because of the improvement and integration of cardiovascular teaching in these schools. Since this program has gotten under way, it has not been possible to accept the applications from new schools or the recommended applications from new schools because it is not right to set up a program in a school and I speak now for the Council, it is not right to set up a program in the school and then kill it off every year or two because somebody wants to supply support for another place. So essentially, those that did not choose to start their programs will not find support in this program for it.

GRANTS TO STATES

Mr. FOGARTY. In your grants to States for detection, diagnosis, and other control activities, you show a decrease of $200,000. In this program, these funds are provided to provide follow-up services in the community, case finding, and clinical services for cardiac patients. Will you give us an example of how one of these clinics operates in a State that has been helped by Federal funds, especially in case finding, how they go about it?

Dr. VAN SLYKE. Well, the case finding is conducted in one of several ways. The cardiologists of the community or the physicians of the community working with local health departments set up a clinic and through supplementation of this clinic through such means as the fluoroscope or electrocardiograph or cardiological consultation, people are funneled through the clinic and if heart disease is present, these people are in a position where these conditions can better be brought to light.

I have before me here the plans of the various States, Mr. Chairman. If there is any State in which you or your committee members are interested, this is just an abstract——

Mr. HEDRICK. Suppose you tell us about Rhode Island.

TYPICAL STATE PROGRAM

Dr. VAN SLYKE. The heart program was started in the latter half of 1950 in the Office of the Director of the Health Service. Total personnel was from other divisions on a part-time basis. No in-service training was done. The program was related mainly to surveys of existing heart disease in community-wide areas. Also coordination of activities of the Rhode Island Children's Heart Association, St. Joseph's Hospital, and Memorial Hospital with regard to heart and disease control was an important phase of the program. Some work was done on a study of statistics and the epidemiological aspects of heart disease through mortality statistics and development of rehabilitation services. No clinics were in operation during 1950. Federal heart funds available for 1950 fiscal year amounted to $10,793.

In 1950, Rhode Island plans to establish a registry of community resources for cardiacs, to participate in educational activities for lay and professional groups and to institute in-service training of public health personnel. Plans are set up to provide financial support to the following clinics during the fiscal year 1951: Rhode Island Hospital, St. Joseph's Hospital, Sayles Memorial Hospital. This part of the program is heart-control activities in relationship to State programs—it is, as you know, Mr. Chairman, conducted in cooperation with the Bureau of State Services of the Public Health Service, so that we have a tie with the State health departments.

DIRECT OPERATIONS IN RESEARCH

Mr. FOGARTY. Direct operations in research, you show an increase of $124,000.

Dr. VAN SLYKE. Yes, sir.

Mr. FOGARTY. What is that for?

Dr. VAN SLYKE. These additional funds are needed since we eliminated lapse. Our employees will be on a full-time basis and because we have additional employees and additional laboratory expenses. The balance will go to pay for increased expenses such as animals, glassware, and so forth.

Mr. FOGARTY. Under technical assistance to States, is that the same type of service that was given under the Cancer Institute to the various States?

Dr. VAN SLYKE. Yes, sir.

GRANTS TO STATES

Mr. FOGARTY. I will ask that the table at page 87 showing the grants to the various States be put in the record.

(P. 87 is as follows:)

Allocation of grant-in-aid funds for heart disease control, fiscal year 1951

State or Territory	Allocation	State or Territory	Allocation
Alabama	$44,000	New Jersey	$39,900
Arizona	15,400	New Mexico	14,700
Arkansas	34,300	New York	91,100
California	71,700	North Carolina	53,400
Colorado	18,400	North Dakota	13,600
Connecticut	21,600	Ohio	64,000
Delaware	11,200	Oklahoma	33,200
District of Columbia	14,900	Oregon	21,600
Florida	30,300	Pennsylvania	87,700
Georgia	44,100	Rhode Island	14,400
Idaho	14,000	South Carolina	34,100
Illinois	61,400	South Dakota	13,800
Indiana	39,900	Tennessee	43,500
Iowa	30,900	Texas	75,800
Kansas	24,900	Utah	14,800
Kentucky	43,200	Vermont	12,300
Louisiana	37,300	Virginia	37,500
Maine	16,800	Washington	25,900
Maryland	24,000	West Virginia	28,300
Massachusetts	41,500	Wisconsin	34,400
Michigan	53,300	Wyoming	11,400
Minnesota	34,100	Alaska	10,500
Mississippi	40,700	Hawaii	13,600
Missouri	41,800	Puerto Rico	41,800
Montana	12,700	Virgin Islands	2,700
Nebraska	19,400		
Nevada	10,400	Total	1,700,000
New Hampshire	13,800		

BLUE BABY OPERATION

Mr. HEDRICK. Doctor, we hear a good deal about the blue baby operation at Johns Hopkins. I wish you would tell us something about that.

Dr. VAN SLYKE. The blue baby operation, without going into the technical details of it, is essentially an operation that closes, in effect, the wall between the chambers of the heart. De-oxygenated blood is pumped through the system. As you know, Dr. Hedrick, it is an operation for experts. It is an operation which should be conducted only when the diagnosis has been very carefully made and does represent an important and dramatic advance for the people who have this. But it is really not, sir, of far-reaching public health significance. The thing that it does raise, though, is that it encourages us to believe that when we get the heart pump-oxygenator, artificial heart, mechanical rig that can take the blood and bypass the heart and also give it oxygen so that you can open up and work on the valves, that is when the payoff is going to come and I rather suspect, gentlemen, that that payoff will come within a very short time, within the next several years we will see intracardiac operations on those valves. I think you asked me last year about valves. This is just a year later and we can talk realistically about a hope in that field. We cannot; we could not a year ago have been nearly so optimistic about doing something about heart murmurs which mean leaky heart valves.

Now, a year later, which because of the research that this committee has seen fit to provide the funds to support, because of the activities of scientists around the country, we are very much closer to it than a year ago. I do not feel that I should introduce the scientists' names into the record who do this. We have four groups we are supporting. I can say that it looks very encouraging. As you know, technically

one of the problems we have to face is that when you beat up blood and put oxygen into it, it foams; that has been one of the biggest problems to lick. I confidently feel that that problem is just about licked now and pretty soon, I hope within the next several years, we will find mechanical instruments taking the place, for a short time, a limited time, of the heart in pumping blood and oxygenation of the blood so the surgeon can actually go in and work on the valves. We have had the operation, you know, where the vein of the heart has been hooked up to one of the arteries and there is a retrograde flow to get oxygenated blood through but that is such a tricky operation I do not believe it will ever come into use where you work with a heart that is pounding, and paper thin tissues to sew. It is just not anything that will ever get too far.

RHEUMATIC HEART

Mr. HEDRICK. When you speak about rheumatic heart, what do you mean? The committee might be interested in knowing that.

Dr. VAN SLYKE. Dr. Hedrick, as you know and I am putting it on the record at this point, rheumatic heart is essentially a heart in which the mitral valves have been damaged by the infection of rheumatic fever.

Mr. HEDRICK. Endocarditis, is that correct?

Dr. VAN SLYKE. That is right; the heart valves get thick and knobby and are replaced with calcium. So instead of having a nice valve which opposes readily, you have a jagged rough edge which tries to come together and because they have been scarred, the valves hold back and the valves are never completely closed. That is that portion of endocarditis because it covers the valve and covers the inner surface of the heart. When I spoke about heart operations, valve operations a moment ago, we do not ever expect that we are going to return these valves to normal. Here you have got a valve that won't open enough to let blood in and won't close enough to keep it from washing back and I think with surgery we can pretty effectively promise to take care of an awful lot of that. That is the kind of heart condition that is a heartbreaker. It is the one that comes in at 25, 30, 35 years of age. Takes out people we just cannot afford to lose. It takes the wage earners, the mothers, leaving the family.

Mr. HEDRICK. That is one of the common causes of death, is it not, where some of these particles of vegetation wash off into the blood stream and lodge in the brain?

Dr. VAN SLYKE. That is another point I am glad you mentioned. I did not mention that. If they do not die of the incompetence, the failure of circulation, what Dr. Hedrick says is that this vegetation washes off and they can die by heart stroke. It is really a cerebral thrombus.

Mr. HEDRICK. The laity call it apoplexy.

Dr. VAN SLYKE. Or it might hit the lungs and be equally dramatic in its effect.

Mr. HEDRICK. That is a rather common cause of death, too, is it not?

Dr. VAN SLYKE. Yes, sir.

Dr. TOPPING. Mr. Chairman, back when I was in medical school it was one of the common causes of death. They developed an

infection some place in the body. This developed into bacterial endocarditis, where the bacteria were growing on these worn-out valves. Tremendous changes have taken place in the treatment of bacterial endocarditis since I was in medical school. The advent and common usage of the antibiotics and sulfa drugs have helped. Many, many people are walking around on the streets today that have had several attacks of bacterial endocarditis on the old rheumatic heart; the antibiotics have been able to get rid of the organism and let them live out a little longer of their life span.

Mr. HEDRICK. I suppose penicillin would help?

Dr. VAN SLYKE. Penicillin, streptomycin, aureomycin, and all the sulfa drugs have been of great value in the treatment of endocarditis.

ENLARGED HEART

Mr. HEDRICK. When can you safely say that a heart is enlarged? They are like noses; they are different in size in different people.

Dr. VAN SLYKE. Well, Dr. Hedrick, probably, as you I am sure know, there probably is less difference in the size of hearts than there are in certain other things, as noses. We say the transverse diameter of the chest is the measure of the size of the heart should be and what it—when it exceeds that by possibly half an inch, one-half to two centimeters, you describe the heart as enlarged. As you also know, and for the record I point out, that many of the types of enlargement of the heart have a change in the type of shadow. The hypertensive heart gets boot shaped. It may not at first tend to get so large but it gets boot-shaped. The shape of the heart where there is an insufficiency of the mitral valve which does not close and blood leaks back into the atrium and the auricle and has to be repumped, that heart has a bigger spot on the upper left quarter of the shadow that is characteristic of increased heart size.

Mr. HEDRICK. How about the compensation otherwise? That is a very common diagnosis of lots of doctors, slight enlargement of the heart.

Dr. VAN SLYKE. Yes, sir.

Mr. HEDRICK. I wonder if they have grounds for making that kind of diagnosis.

Dr. VAN SLYKE. I do not have the papers here in my hand so I would hate to hazard a guess on that. I think I understand the position you find yourself in.

MYOCARDITIS

Mr. HEDRICK. What are the early symptoms of myocarditis?

Dr. VAN SLYKE. By and large, if you take the typical classification of chronic, that is what you are referring to, chronic myocarditis, that probably the first thing a person would notice would be a slight shortness of breath, something that he would not quite expect to get. There will be a little edema of the ankles and the legs. But there will be an increase in this edema not necessarily associated with hot weather and that is about all that you find in the very early cases. Later on there will be discomfort, chest discomfort, shall we say, as a failing heart does not carry on around enough oxygen to supply the portions of the body and it will be felt; this anoxia will be felt pretty much as a discomfort, not a pain but a discomfort, not in the chest but in the sternum.

Mr. BUSBEY. How would you distingush that discomfort from indigestion pain?

Dr. VAN SLYKE. That is really a fine question because it points out an error that has been made so many times by so many physicians. A patient comes in complaining of indigestion and too often the doctor will treat him for indigestion. I think every person who comes in for heart trouble should be examined for gastro-intestinal disturbance and every person who comes in for indigestion should be examined for heart trouble. There is no other way to differentiate it, really.

Mr. DENTON. Myocarditis is inflammation of the heart?

Dr. VAN SLYKE. Actually, it means an inflammation of the muscles of the heart.

Dr. TOPPING. To go back to Mr. Busbey's question if I may, Mr. Chairman, you know back in the 1910–20 period before so-called coronary disease was well known there were a lot of diagnoses of death listed as acute indigestion; that was a rather common diagnosis in the early part of the century, but as we have known more and more of coronary disease and how it develops, we see now rather infrequently the diagnosis of acute indigestion as the cause of death.

Mr. BUSBEY. Is that not caused from food that one might eat that would cause gases and bring pressure on the heart?

Dr. TOPPING. Actually, the acute indigestion that has been listed as the cause of death is almost always found to be, if autopsy is performed, actually thrombosis of one of the vessels in the heart which has denied the heart muscles the necessary blood for it to continue to function.

Mr. BUSBEY. A friend of mine went out and ate an extra large quantity of red cabbage one noon for his lunch. He just keeled over like that [indicating].

Dr. TOPPING. That is the kind where—even though diagnosis has been frequently made of this—in the autopsy they find there has been a thrombosis of one of the coronary vessels, denying blood to the muscles of the heart.

Mr. HEDRICK. Doctor, do you believe that the man or woman who can lie down and sleep 8 hours on the left side would have any serious heart trouble?

Dr. VAN SLYKE. I do not think that that would be of any particular value in differentiating.

Mr. BUSBEY. I am glad to hear that because I have slept on my left side all my life.

Mr. HEDRICK. I had a patient not long ago who was having trouble with his chest and nowhere else. Somebody told him that was a sign of serious heart disturbance.

Dr. VAN SLYKE. If it is, it is new to me.

Mr. HEDRICK. That is what I thought.

Dr. VAN SLYKE. I thought you might pose that question when Dr. Felix gets here. Maybe a neurologist will have a little better explanation for it. Neurologist—I did not say psychiatrist.

ANGINA PECTORIS

Mr. DENTON. What is angina pectoris?

Dr. VAN SLYKE. The term, Mr. Denton, means pain over the pectoral region. These are the pectoral muscles here, and angina means pain.

Mr. DENTON. Is that a symptom or is it a disease?

Dr. VAN SLYKE. It is a symptom, pure and simple; it is a pain. It is probably one of the most important signs we have of coronary insufficiency. A man who goes a little too fast to catch a street car comes down with the thing called in old medical literature, the devil's grip—a terrific pain. When they first get it, they describe it as something they are afraid they are going to die; when they have had a few attacks, they are afraid they won't die. That is a symptom, a referred pain arising from the lack of oxygen to a portion of the heart muscles. Incidentally, I think the committee would be interested to know that some of the research work which is going on now is extremely important in the sense of relieving this pain which is a dreadful thing and the more the pain lasts the harder it is on the patient. They just spray it with ethyl chloride from a glass tube, the same material sprayed on a boil when you want to open it. If they spray that on the center of the chest that pain just disappears.

Mr. DENTON. They live some time with that, do they not?

Dr. VAN SLYKE. The degree of pain is not a very reliable indicator as to what portion of the muscle is attacked. That ties up, too, with Mr. Busbey's question in a sense that they can have lack of blood supply to a portion of the heart muscle and many of them will live because there are certain trigger areas in the heart area where if you get a loss of supply to that area you probably fall over dead. Just like that. If you move it over just a little bit, it probably will continue. Maybe you will have one of those that will last for 25 years.

Mr. DENTON. The reason I am asking you, I know of a case of a man who had angina pectoris but his doctor said there was not a thing wrong with him. I saw him one day when he had one of his attacks. He lay flat on his back, sweat coming out of his face, and just all white; terrible pain.

Dr. VAN SLYKE. The patient did not have any nitroglycerin to put under his tongue?

Mr. DENTON. I don't know about that. What I wondered about was that he said there was nothing wrong with his heart. The doctor could find nothing wrong with his heart but he did say he had angina.

Dr. VAN SLYKE. I can answer it only this way—that if that was true angina, it was a symptom of quite serious heart disease.

Mr. DENTON. Why could they not find that in examination, these others?

Dr. VAN SLYKE. Did they do electrocardiagraphs on him afterward?

Mr. DENTON. I think they did.

Dr. VAN SLYKE. You would have expected them to take it out, but there are cases of spasm which come on, not blood-clotting, but spasm of the vessels in which this pain comes on the lack of oxygen in the heart muscles develops. You may not find it afterward. That is the reason I stressed in the earlier answer to your question that that is a very important sign of heart disease.

Mr. Denton, I will say this: We do not have any 100-percent methods. Not very far from this building in which we sit now there was a fireman examined and he stepped outside the door and fell dead after being pronounced O. K.

Mr. BUSBEY. I had a friend of mine who was accepted by an insurance company for a policy—in Chicago—he dropped dead in the lobby of the building immediately after leaving the doctor's office after he was pronounced okay and given the insurance.

Dr. VAN SLYKE. Let me not confuse this issue in any way, but if I can be just a bit pedagogical, Mr. Chairman, the heart, though it is filled with blood gets none of its oxygen from the blood it contains except as that blood goes out into the aorta and goes into one of the coronary vessels. The whole heart muscle must have oxygen, must have blood. The oxygen from the blood that comes down in the blood in these coronary vessels. Certain areas of the heart can stand a greater loss of oxygen than other areas. You remember these trigger areas I mentioned about a minute ago, if there happens to be a spasm which involves the vessel or there happens to be a progressive narrowing down of the lumina of the vessel at a certain point, at some point that little tiny difference, it may be associated with nervousness at the examination, emotion, spasm may set in, the person can drop dead when he could not possibly have picked it up any other way.

Mr. FOGARTY. This electrokymograph will not pick it up?

Dr. VAN SLYKE. The electrokymograph will not pick it up. The thing we have the greatest hope for is the type of thing that I spoke about when I spoke about these giant fat-protein molecules in the blood. They seem to be associated with that. Remember, this is a preliminary report I am making to this committee. I do not want to come back here next year and be held for it. But it looks very interesting. If these giant protein-like molecules are causative or if they are an indicator of trouble, we would like to know about it at the earliest possible time so we can redouble our efforts to try to prevent these things from happening or if they are in large concentration in your blood to bring them down to normal because they may have a causal relationship.

Mr. HEDRICK. How do you bring them down to normal? What do you do?

Dr. VAN SLYKE. We do not know what we would do yet. We have tried certain of the plants where we have kept the enzyme system intact in the extract; some of those look encouraging. I have confidential information which leads me to believe that a new substance which one of our scientists is working on looks promising; nothing more than that. I would not want to say more than that.

Dr. DEARING. If I might comment here about making a diagnosis and inability to find anything, now and then you do find evidence of a serious impairment such as Mr. Busbey mentioned yesterday with stomach ulcers and Mr. Denton mentioned today. Perhaps I might put it this way: Practically all of our observations and tests on the internal organs or operations where the heart or stomach are involved, they are not like an automobile engine which you can take apart to see whether the cylinders are scored or whether they are sticking. Every test that we use on the heart practically is an indirect test. The electrocardiograph measures electric currents which are generated by the heart but we do not take the heart out and put electrodes on it. We pick them up at certain places which usually will show a defect but we find out now and then that there is a silent area which can be affected and which does not make any changes in the measurements we take. Similarly, when we examine the stomach by the barium method, putting something in it which creates a shadow and we are looking at a shadow picture and not an exact picture. That is the reason why because of this indirection and inability to take the thing out and take it apart like you would an automobile engine we some-

times miss things. On valve trouble in the heart, you can tell by listening to a squirt or a hiss, not by taking out the valve and saying that it is not seating properly or has got sand in it.

TEACHING GRANTS TO MEDICAL SCHOOLS

Mr. DENTON. You spoke of the Cancer Institute and the Heart Institute. How much does each school get?

Dr. TOPPING. If one school got all three grants, which some of them do, there would be $25,000 for cancer—this is for the teaching of cancer—there will be $14,000 for the teaching of heart disease within the medical school; that would make $39,000; and there would be $15,000 as a maximum to any one medical school under the mental-health program about which you will hear later. That will make a total of $54,000. That would be the maximum they could get for assistance in the teaching of the three programs of cancer, heart, and mental health.

Mr. DENTON. Would there be any objection from any source because of these grants?

Dr. TOPPING. None that I know of. As Dr. Van Slyke says, there were only 43 of the 73 schools that got heart grants, and as Dr. Felix will tell you this afternoon there are 42 schools, I believe, that get grants for psychiatry in the field of mental health. So actually there would only be a few, very few schools that would get all these grants.

Mr. DENTON. You do not control the education of the schools in any way?

Dr. TOPPING. None whatever. Dr. Felix can explain to you these programs in teaching of heart, cancer, and mental health which are programs designed by the school in cooperation with the other medical schools so that there can be some uniformity in teaching in medical schools on these very important illnesses.

Dr. DEARING. May I say in further regard to that question that Dr. Herman Weiskopf, chairman of the Council on Education of the American Medical Association, told me personally about 3 years ago when the program was first being initiated for grants to medical schools on cancer, that he thought it was the best conceived type of aid which had ever come to the medical schools to meet a serious need from any source.

RHEUMATIC FEVER

Mr. SCHWABE. Doctor, you made reference the first time in your testimony here to rheumatic fever which is more prevalent among children and people in the teen ages or under, as I understand it.

Dr. VAN SLYKE. Yes.

Mr. SCHWABE. Resulting in a rheumatic heart condition.

Dr. VAN SLYKE. Possibly.

Mr. SCHWABE. Frequently?

Dr. VAN SLYKE. Yes.

Mr. SCHWABE. In this rheumatic fever, is there actually a fever or the disease manifested or accompanied with high temperature, higher than normal?

Dr. VAN SLYKE. Mr. Schwabe, the answer to that question must be, yes and no. There must be a case of rheumatic heart fever, because they are later found to have rheumatic heart disease. Sometimes the

cases of rheumatic fever are so mild that not even the patient knows he has it. It might be called growing pains or he might even feel a little indisposed—that either he or the family have ascribed to a cold.

Mr. SCHWABE. Or to growing pains, they used to say.

Dr. VAN SLYKE. When a child speaks of growing pains, part of the educational activities are directed to school teachers. She will refer the child back to his parents or the school physician because that person should come under care immediately. The other side of rheumatic fever is the direct antithesis of this type of case I have described where the disease process is so acute, the onset is very abrupt; inside a few hours the little boy or little girl may be gasping for breath with extremely high fever and when we get such a case as that where they are practically moribund within 12 to 24 hours, there never has been anything up to now that we could do. At that time we diagnose real, honest, rheumatic fever, myocarditis; the heart just balloons out because it has not the power to keep pushing the blood through and dilates and the patient dies. It is that type of case in which there is absolutely no hope up until now, and we have had quite a number of patients saved by ACTH and cortisone. The most dramatic thing you could ever imagine seeing, the thing that we could not believe possible.

Dr. TOPPING. I recall to your mind the pictures which Dr. Sebrell showed you of a case which you can hardly visualize: First the picture of an acutely ill child and then the child 20 days later after treatment with ACTH or cortisone—a remarkable change in a person.

Mr. SCHWABE. In most of these cases there is scarcely any consciousness where this great danger later results to the heart, is that not true?

Dr. VAN SLYKE. I do not know that I could subscribe to that, Mr. Schwabe. The cases that do not come to our attention—so it is hard for us to put a statistical value, but the type of rheumatic fever which does come to our attention, and statistically we have to eliminate the others, the bulk of them are less acute but they do have fever and they are tied up and they have migratory pain from joint to joint. Those cases might be down for months. It is a pretty serious process.

Mr. SCHWABE. You are convinced that many of them do not have acute attacks or illness and have it in such mild form that it is not easily detected and yet may result in rheumatic heart?

Dr. VAN SLYKE. Yes, sir; you are absolutely right about that. What the total number is we do not know.

Mr. SCHWABE. But you are sure that the condition exists?

Dr. VAN SLYKE. Yes, sir; because we find, and the reason we are sure is that we find rheumatic heart disease in these people later.

Mr. SCHWABE. That is a predisposing cause, is about all you can ascribe it to?

Dr. VAN SLYKE. That is right.

ENLARGEMENT OF THE HEART

Mr. SCHWABE. Now this matter of enlargement of the heart which they used to call athlete's heart, did they not?

Dr. VAN SLYKE. Yes, I believe that term has been used.

Mr. SCHWABE. Rather loosely, perhaps. The matter of enlargement is due to many causes, not confined to any one particular cause,

and in many instances the organ may be reduced in size materially through therapeutic methods?

Dr. VAN SLYKE. Particularly if it is due to increase in resistance out some place in the pipelines. If you lower that resistance, and it can be done by therapy and diet and in many instances if you lower that resistance, the heart has a tendency to return more and more to normal size.

Mr. HEDRICK. Most of the time that point of resistance is the kidney; is that correct?

Dr. VAN SLYKE. That is correct.

Mr. HEDRICK. In a few cases it may be the liver.

Dr. VAN SLYKE. It is a pretty difficult thing if you ignore certain types of kidney infection; if you just allow them to go on without proper treatment, you can get into a lot of trouble. That is the reason penicillin and the sulfonamides and fever are very important because you can prevent chronic Bright's disease which really means increased pressure in the kidneys and the resultant effect on the heart.

VALVULAR DISORDERS

Mr. SCHWABE. You have not done too much work in your research with reference to valvular disorders, and they are only in their infancy, and so far is confined rather largely to treatment with sulfa drugs which kill infection primarily, I take it, and some surgery; that is about as far as you go.

Dr. VAN SLYKE. Yes.

NERVOUS TENSION

Mr. BUSBEY. Doctor, would you briefly explore for the committee the interrelationship between various heart diseases and the fact that a great many people might have a tendency to worry. In other words, I have been led to believe that in many cases heart conditions have been brought on due to the fact that the individual has many worries about something, or he assumes worries, rather than overexertion.

Dr. VAN SLYKE. Mr. Busbey, we cannot give you a factual answer to that. If you do not mind, I would like to give my impression. Worry per se does not cause heart disease but the person who is predisposed to worrying is a person who operates with a rather high level of nervous tension, a nervous tension, whatever you want to call it. I think that is as good a term as any. The nervous effect which, shall we say, causes a person to worry also can cause tension on the nerves affecting the vessel walls. Every single artery has muscles and those muscles are completely under control of the nerves. If you dissolve the man or the human body and left nothing but nerves, you would see a complete picture of the human body, the nerves are that widespread. So I feel sure that what we talk about when we say a person gets worries and gets heart disease, I think there is truth in it, but it has to be interpreted in the light that a person who worries a lot is under high tension and the same thing that causes worries causes this increasing blood pressure. I think it is quite definite and with this type of tension you have increased heart rate. The heart has to put out more foot-pounds of work per day.

Dr. TOPPING. There is a field of medicine that has developed quite a bit in the last few years called psychosomatic medicine, pertaining to the effects on body functions of the psychological and the psychiatric aspects of one's total body. Maybe this afternoon when Dr. Felix is here in the Mental Health Institute hearings, you might ask the question of him and see how he answers it.

DEVELOPMENT OF ACTH BY ARMOUR LABORATORIES

Mr. BUSBEY. In the development of ACTH by the Armour Laboratories they have over a long period of years spent a tremendous amount of money. How will they get repiad for all that money they have spent in research on ACTH. Do they have a royalty on it or do they get a certain percentage of the profits?

Dr. VAN SLYKE. It is my understanding, Mr. Busbey, that Armour & Co. have done a perfectly marvelous job. They have spent millions of their own funds in perfecting methods of extracting ACTH from the pituitary of hogs. As a matter of fact, it costs them lots of money just to take the pituitary out of the hog; costs a lot to have the butcher get in there at the base of the skull and take out this little tiny gland.

If it follows, and I do not know it for a fact—I just assume if it follows as other things have followed that Armour & Co. in selling ACTH must amortize, maybe that is not the word, but they must get back their investment, the money they have put into research in ACTH, in development and extraction of ACTH, and after their expenses in this field are paid off and history repeats itself as it has in other things, the price of ACTH will decrease somewhat since the research part of it is paid off. I do not know this for a fact. I just assume that is what would occur. There are other companies producing ACTH but, of course, Armour is the big one. They have done a perfectly wonderful job for the citizens of this country by being willing to gamble their funds in some operation of this kind in medical research.

Mr. BUSBEY. Having gone to all the trouble and expense on research projects and developed certain advancements in the field of medicine, what procedure is used to disseminate that knowledge throughout the country to the physicians who are particularly interested in that field?

Dr. VAN SLYKE. Well, there are many avenues of approach. The first, dissemination of knowledge takes place within the scientists working on the programs so that there is alertness in the scientific field. I do not know whether Dr. Sebrell or Dr. Topping have mentioned the kind of interchange we have. Then when the discovery or developmental work has been carried forward sufficiently far, the usual methods of papers in the journals, the speeches that are made before the conventions, the symposia that are set up at various institutions, the activities of the State and local health departments in bringing this matter through pamphlet form, through movies, through lectures, through refresher courses to physicians, no one single thing does the job, Mr. Busbey; it is a combination of all of these things and I think I might stress that the drug firms are doing a very nice job. Some of the pharmaceutical manufacturers, for instance, without it

being their product, simply because of the type of service and good public relationships with the medical profession turn out some perfectly wonderful informational materials which represents a very important part of this informational activity.

RESEARCH IN OTHER COUNTRIES

Mr. BUSBEY. I appreciate that science knows no national boundaries. But I am interested in ascertaining what some of the other countries are doing along research on heart, on cancer, and various other things that we have out at the National Institutes of Health in comparison to what we are doing in this country? How do you finance it?

Dr. VAN SLYKE. There is quite a bit of research work being done in certain other countries. In Sweden, particularly, there is a very active interest in the heart field. There is quite an active program of research going on in Sweden which is financed by the Government. In Great Britain, the Medical Research Council has a rather adequate research program and you recall earlier in my testimony, Mr. Chairman, I spoke about the Medical Research Council of Great Britain working with us in this cooperative study in ACTH and cortisone and rheumatic fever. They get their funds from the Government, I understand. There is less work done in other countries than in the two I have mentioned. Probably some of the others could speak better than I can to it. In Canada, there is quite a fair amount of research done which is supported both by the Federal Government, by the provincial governments, and by voluntary contributions as is the case in this country.

Mr. BUSBEY. What I am leading up to, Doctor, is trying to determine if in addition to the funds that this committee recommends if you have any knowledge of the fact that any of the funds that we have contributed to these various countries under the Marshall plan might use part of those funds through Government sources for their research work?

Dr. VAN SLYKE. I do not have any such information, Mr. Busbey. As a matter of fact, we looked into that at one time and we did not see any evidence that Marshall plan funds were being used for that particular type of purpose.

Mr. BUSBEY. It might be considered that they are used indirectly inasmuch as our contribution to their government relieves the financial pressure to the point where they can appropriate funds out of other resources.

Dr. VAN SLYKE. That is very possible, sir; I just do not have information on it.

Mr. BUSBEY. Anything we develop here in research, of course, is made available to all the countries of the world, once it is out, at least in terms of information.

Mr. FOGARTY. A year ago there was some testimony to the effect that under the Marshall plan through our newer techniques in drugs to take care of malaria, in the case of Greece, that some help was given to them over there and as I recall malaria was decreased in about 6 or 8 months because of some furnishing of drugs or other assistance.

Mr. BUSBEY. In other words, Mr. Chairman, in addition to what the Congress appropriates, we do appropriate additional funds that are used for research in countries other than in the United States.

Mr. FOGARTY. Not under this bill, no.

Mr. BUSBEY. Generally speaking?

Mr. FOGARTY. Yes, yellow fever in Panama is another example, is it not?

Dr. TOPPING. I do not think the Marshall plan money goes for research per se. As you say, Mr. Busbey, it may have a general effect in a country but that is not, as I understand, through the Marshall plan directly.

Mr. FOGARTY. I do not mean for research.

Dr. TOPPING. For control and to help them to get the country on its feet and help them control malaria so they will become more productive. They do that, but I do not think straight fundamental research as we have been talking about is supported through Marshall plan funds.

Mr. FOGARTY. This yellow-fever outbreak in Panama, we supplied them with serum?

Dr. TOPPING. That is correct. We were suddenly called on for 750,000 doses of yellow-fever vaccine which we did supply at the request of our Government as an aid to Panamanians to control yellow fever before it goes into Louisiana and some of our mosquito areas. We came to the committee and had a supplement of $225,000 to replace that stockpile that had been completely wiped out. But that is all.

Mr. FOGARTY. Are there any further questions?

COOPERATION WITH AMERICAN HEART ASSOCIATION

Dr. VAN SLYKE. I would like to report to the committee that we have complete cooperation with the American Heart Association. We feel that the Public Health Service represents the Federal Government's interest in the heart-disease problem and we feel that the American Heart Association is the main voluntary agency in it so that we have joint staff meetings with them; we interchange data on all our undertakings; they know everything that we are doing. We do not duplicate their activities. We feel we are in the same boat rowing in the same direction. The total funds which this committee makes available and which the taxpayers make available through contribution to the American Heart Association are nowhere nearly sufficient for the problem. They sit in with us at our advisory council meetings. I am a member of the American Heart Association board of directors and more recently, as I think the committee has been told, I have accepted responsibility as chairman of the fund-raising campaign for the Washington Heart Association. So we do have, and I think the committee would be glad to know that we do have, complete liaison with the American Heart Association and with the local chapter so that we are not consciously or unconsciously spending a penny in unnecessary duplication, a perfectly splendid cooperation.

Mr. HEDRICK. How much money is raised a year through the Heart Association?

Dr. VAN SLYKE. About $4 million a year from year to year. Of course, they are a newcomer to the field. The National Heart Institute is a newcomer in Government circles. For many years they went on as a scientific group. It is only within the last 3 years they have entered the true voluntary agency field. And unless there are questions, further questions, Mr. Chairman, I surely thank you and your committee for the consideration you have shown us this morning.

Mr. FOGARTY. Thank you, gentlemen.

THURSDAY, MARCH 1, 1951.

MENTAL HEALTH ACTIVITIES

WITNESSES

DR. R. H. FELIX, DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH

DR. NORMAN TOPPING, ASSOCIATE DIRECTOR, NATIONAL INSTITUTES OF HEALTH

ROY L. HARLOW, CHIEF FINANCE OFFICER

MENTAL HEALTH ACTIVITIES

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
Appropriation or estimate	$11,612,000	$10,000,000	$10,800,000
Applied to contract authorization	−750,000	−2,375,000	−823,000
Contract authorization	2,150,000		
Total available for obligation	13,012,000	7,625,000	9,977,000
Unobligated balance, estimated savings	−275,130		
Savings under sec. 1214		−495,000	
Contract authorization not required for obligation	−425,000		
Obligations incurred	12,311,870	7,130,000	9,977,000
Comparative transfer to—			
"Hospitals and medical care, Public Health Service"	−3,058,022		
"Salaries and expenses, division of service operations, Federal Security Agency"	−20,160		
Total direct obligations	9,233,688	7,130,000	9,977,000
REIMBURSABLE OBLIGATIONS			
Reimbursements for services performed	1,511,199	17,600	21,675
Payments recieved from non-Federal sources	11,008		
Obligations incurred	1,522,207	17,600	21,675
Comparative transfer to "Hospitals and medical care, Public Health Service"	−1,505,007		
Total reimbursable obligations	17,200	17,600	21,675
Total obligations	9,250,888	7,147,600	9,998,675

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
1. Grants:			
(a) Grants to medical schools and other institutions and to individuals for research and training:			
(1) Research projects	[1] $798,254	[1] $1,146,000	[1] $1,613,000
(2) Research fellowships	103,663	206,000	256,000
(3) Expansion of teaching of subjects relating to mental illness	[1] 1,921,516	[1] 2,299,000	[1] 2,600,000
(4) Training stipends	960,083	1,050,000	1,400,000
(b) Grants to States for detection, diagnosis, and other preventive and control services	3,293,697	3,200,000	3,100,000
2. Direct operations:			
(a) Research	310,127	640,800	800,000
(b) Other direct operations:			
(1) Review and approval of research and training grants	122,883	118,400	130,000
(2) Training activities	172,733	171,200	190,000
(3) Technical assistance to States	347,836	379,400	405,000
(4) Administration	227,896	294,200	306,000
Total funds for program performance	8,258,688	9,505,000	10,800,000
Adjustment for obligations incurred in advance of program performance	[1] 975,000	[1] −2,375,000	[1] −823,000
Total direct obligations	9,233,688	7,130,000	9,977,000
REIMBURSABLE OBLIGATIONS			
2. Direct operations: (b) Other direct operations: (3) Technical assistance to States	17,200	17,600	21,675
Total obligations	9,250,888	7,147,600	9,998,675

[1] Some of the obligations for grants for research projects and teaching were incurred several years in advance of actual program performance. By means of the adjustment line shown in this schedule, the amounts by activity reflect the actual performance level for each year.

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	216	245	254
Full-time equivalent of all other positions	4	8	8
Average number of all employees	188	226	247
Personal service obligations:			
Permanent positions	$902,902	$1,106,915	$1,221,543
Part-time and temporary positions	17,050	31,000	37,500
Regular pay in excess of 52-week base	3,273		3,567
Payments above basic rates		4,350	3,900
Total personal service obligations	923,225	1,142,265	1,266,510
Deduct charges for quarters and subsistence	4,320	4,320	4,320
Net personal service obligations	918,905	1,137,945	1,262,190
DIRECT OBLIGATIONS			
01 Personal services	901,705	1,120,345	1,240,515
02 Travel	69,424	106,500	105,400
03 Transportation of things	4,354	6,700	6,300
04 Communication services	5,026	7,500	8,100
05 Rents and utility services	836	250	250
06 Printing and reproduction	19,187	16,750	20,900
07 Other contractual services	42,317	235,300	336,700
08 Supplies and materials	26,829	30,240	36,900
09 Equipment	23,204	44,900	38,900
11 Grants, subsidies, and contributions	8,140,806	5,561,000	8,182,000
15 Taxes and assessments		515	1,035
Total direct obligations	9,233,688	7,130,000	9,977,000
REIMBURSABLE OBLIGATIONS			
01 Personal services	17,200	17,600	21,675
Total obligations	9,250,888	7,147,600	9,998,675

Mr. FOGARTY. The committee has for consideration this afternoon mental health activities. Dr. Felix, do you have a statement for the committee?

GENERAL STATEMENT

Dr. FELIX. Mr. Chairman and gentlemen of the committee, I have a few comments I would like to make before we turn to the appropriation itself.

I might say it is rather appropriate, it seems to me, that the program of mental health activities is before you following the programs of cancer and heart. While they are new programs, too, of course, they have behind them years of traditional experiment in the fundamental fields of physiology and chemistry. Mental health, on the other hand, is a relatively new field. There is not a great body of knowledge in the field of physiology and chemistry on which we can base our operations. There is a great need to know much more about this field. It is rather interesting when you stop to think that the fathers of modern psychiatry are either still alive or have died within the last few years. My old teacher, Dr. Meyer, of Johns Hopkins, has died in the last 2 or 3 years, one of the founders of modern psychiatry

SIZE OF THE PROBLEM

When one turns for a moment to look at the size of the problem that we have to deal with, one becomes rather appalled with the enormity of work we have before us. There are approximately 550,000 people in the United States who are in mental hospitals and about an eighth of that number have been in hospitals for over 25 years. It is estimated that the minimum number of people in the United States who require long-term hospitalization for mental illness is around 775,000. On the basis of some studies that have been carried on in various parts of the United States, it is estimated that, on any day of the year, approximately 6 percent of our population, or about 9,000,000 people, are in need of mental health services of one kind or another. It stands without elaboration, I believe, that our psychiatric services and mental health facilities in the country are grossly overtaxed and overcrowded.

FUNDS DISBURSED BY VA FOR NEUROPSYCHIATRIC DISABILITIES

I think the figures of the Veterans' Administration are illustrative of what I am trying to tell you. Out of one million nine hundred and forty-two thousand-odd people in veterans' hospitals in 1949, 453,000 and a few hundred are neuropsychiatric patients, that is, those that are in hospitals. In that year the Veterans' Administration paid per month, not per year but per month, for neuropsychiatric disabilities from World War I and World War II about $23,000,000. That is out of a total pension bill of around $85,000,000. That is drawn from a group of people who broke psychologically in the prime of their life, by and large.

MENTAL DISORDERS DUE TO INCREASED STRESS

Some estimates have been made from time to time over the last few years of the chances of a person going to a mental hospital. In 1920, a child born that year, according to actuarial studies, had about 1

chance in 20 of winding up in a mental hospital. In 1940, a child born that year had about 1 chance in 12 of winding up in a mental hospital. What it is in this year of stress, 1951, we don't know. But if I were asked to hazard a guess, I would say it would be not less than 1 out of 10.

Now there are increased stresses in our population generally today, of course, we all know. These are exacting a toll in a variety of difficulties: frank mental illness, psychoneuroses, maladjustment to society, and so forth. These are coming to the attention of physicians over the country. It has been estimated, as I told the committee, I believe, last year or the year before, on the basis of polling the State medical societies in several States that approximately 60 percent of the patients that come to a doctor's office have at the time they are seen by the doctor an emotional problem which, either in total or in significant part, contributes to the illness which they have.

Mr. HEDRICK. Is that more frequent in women than men?

Dr. FELIX. I don't believe, Dr. Hedrick, that there is a great deal of difference. It used to be thought it was more frequent in women, but the latest figures I have would indicate that it is practically the same as far as we can tell.

We are going to have increased problems, I feel sure, in the next few years, emotional problems, in children because of increased tensions in the family. We have seen evidence of some of this, particularly in people living in so-called critical target areas. We are going to find disturbances in families as people move from their home community to industrial areas because of the need for additional industrial workers, with the less satisfactory living conditions which we can expect in that situation, and we know what happened during the last war in those circumstances.

There are these and a number of others that I could elaborate on, but this is illustrative of the problems which are going to affect the morale of people, and when you affect the morale of people, you are making them more liable even than they were before to emotional problems and difficulties.

ADDITIONAL INFORMATION AND ACTION NEEDED

Now there are some things we need to know and some things we need to do if we are going to meet this situation. We are trying to do something about it and we hope to do more. We need more measurable indices of the status of morale of the population, what factors you can identify that are evidences of good morale or poor morale so that you can predict about what the level the morale is. One of the great needs is for more knowledge of the phenomena of emotional health and disease (I deliberately refrain from using the word "psychiatric" knowledge, because it goes beyond that point) by all of the various kinds of people who are going to deal with people as groups, such as doctors, of course, health officers in particular, because of the kind of work they do, nurses, welfare workers, teachers, ministers, rehabilitation workers and similar kinds of people.

We need to have better information about what constitutes the earliest possible detectable symptoms of emotional disorders so that we can get them early. You have heard Dr. Heller and Dr. Van Slyke talk about techniques they have developed for identifying a

case very early. I think it was Mr. Busbey or maybe it was Mr. Schwabe who asked what were the very earliest symptoms of a failing heart. In the field of mental illnesses we are not too clear as to what the early symptoms are yet. We have some hunches but they are not yet good enough to depend on too much. We must know, and soon. We should know now. What are the best kinds of treatment to be given in specific kinds of cases? How can we utilize the few people that we have, and they are very few, I assure you, to the greatest possible advantage?

There is a technique that is being used now known as group therapy, in which they deal with a number of people at one time. These patients are selected because of common problems and common mental disorders. This needs to be studied further to know whether or not it could be applied to larger groups. It was found effective in the armed services during the last war and it is being found effective during the present Korean episode.

SHOCK THERAPY AND LOBOTOMY

There has been a technique developed which is of great advantage to our patients and to the public generally known as shock therapy, which now makes it possible to get some patients out of hospitals in half the time it used to take. However, we don't know what shock therapy does, except that they get better. We don't know what happens inside the person. It is an empirical sort of thing, whether it be electric shock, or insulin shock. We just know that they get better for awhile. There is the new dramatic treatment that you may have heard of known as lobotomy, in which they cut through the frontal part of the brain, which has been found effective in making certain intractable patients more tractable and in getting some patients out of hospitals. We don't know exactly what we do to these patients either except they get somewhat better.

Mr. SCHWABE. Due to relieving pressure.

Dr. FELIX. There is some pressure relief; yes, sir, Mr. Schwabe, but that doesn't answer it. It is more than that. Something is cut. Some tracts are cut. We have got to study this thing from the standpoint of what these tracts are. There are what we call silent areas in the brain to which no function has been ascribed as yet, in all the years we have studied the brain.

Mr. HEDRICK. You mean the frontal lobe?

Dr. FELIX. Yes, sir, which is for the human being a blessing and a curse, I suppose, at the same time, since lower forms of animal life don't have frontal lobes developed as the human does, and that is the area which, when damaged, causes many of the mental symptoms you read about in skull fractures and tumors, and so forth.

There is one thing we need to know very soon—this is more in the way of statistical knowledge than anything else—but we must know where are the psychiatric facilities in the country, all of them, where they are located, how they are staffed, how efficient they are. We need this for the same reason we need to know where hospitals are generally, how they are staffed, how they can be utilized in case of disaster, where we have to take care of large numbers of people rapidly and as effectively as possible. All of this has to be learned.

PROGRAM OF THE INSTITUTE OF MENTAL HEALTH

Now, as the committee knows, the National Institute of Mental Health has only been in existence since the law was passed in 1946 and has been operative under funds of the Federal Government since the beginning of the fiscal year 1947, when the first appropriation was passed. We have made some steps forward in this time. We feel that we have moved considerably off of dead center, but I don't want anyone to think that we feel at all smug about how far we have gone. Compared with what we have to know, what we do know is as a mustard seed compared to a balloon. I think that is not an overstatement of an analogy.

We are conducting three types of activities in the Institute of Mental Health—research, in which we make grants to institutions. As has been described with regard to cancer and heart and the National Institutes of Health program generally, the research applications are cleared through the Division of Research Grants, and as the others, are passed upon by study sections and finally recommended by in this case the National Advisory Mental Health Council.

Mr. FOGARTY. In other words, you follow the same policy as the National Institutes for Cancer and Heart.

Dr. FELIX. Yes, sir; all the same.

Mr. FOGARTY. Granted on the same basis?

Dr. FELIX. That is right. The National Mental Health Act was patterned on the National Cancer Act, and almost in the minutiae, certainly in general, it is the same operation, the same type of operation.

We also make grants for research fellowships the same as they do and we conduct our own direct research at Bethesda and at field stations, and I would like to explain in a moment some of the things we have found out in the last year or two in those areas.

We also make grants for the training of personnel, skilled people in the five areas of neuropsychiatry, public health, psychiatric social work, psychiatric nursing and clinical psychology. It might be interesting to know that of about 25,000 medical students in the United States today, approximately 13,000 are deriving direct benefits from our grants to medical schools, our undergraduate grants. Due to the enrichment of the program. they have been enabled to get, for example, another professor, been able to coordinate teaching of, say, psychiatry with diseases of children and with internal medicine, and so forth. We are indirectly affecting about 20,000 of the 25,000, because in a number of the other schools, we support graduate training and the teachers, while they are on the graduate faculty, may have a class with the medical students, conduct ward demonstrations, or something of that nature.

We are directly benefiting about 5,000 trainees in pyschiatric social work. There are that many students now because the programs have enlarged in the training centers for psychiatric social work where our grants are operative. We are in the same way affecting about 2,300 psychologists, about 500 nurses directly, and because many nurses' training schools are in connection with medical schools, it is estimated that we are indirectly enriching the experience and training of around 12,000 undergraduate nurses during their training school period, and

we are directly affecting and making possible an enriched and better program for around 750 doctors in training in the field of pyschiatry.

We also, as do the other programs, make grants to States, in 53 States and Territories, for the development of mental health programs directed toward the amelioration and particularly the prevention, as far as we can do that, of mental illnesses in those States.

I was able to cast up a rough tabulation which is in very round numbers, but it might be interesting to you to know that at the present time in the 53 States and Territories, and this includes every State and every Territory, there are 333 clinics operating which are deriving a portion of their support from our grants-in-aid funds. By that I mean some of the support is State money; some of it is local money, either municipal or private, but there are this many that are participating in this part of the program.

These 333 clinics delivered 500,000 hours of service to their community last year, that is, fiscal year 1950. Of these 500,000 hours, about 250,000 hours are new hours. These clinics were not in operation before 1947, when our program started. These 333 clinics served approximately 140,000 people last year. These people were referred, by and large, by their physicians, by the schools, through the school physician, or through welfare agencies after clearing through their private doctors where they had such. In addition to this, in order to bring better information to a larger number of doctors, nurses, ministers, teachers, parents, and so forth, there have been conducted during the calendar year 1950, 141 orientation and training programs over the United States in 28 of the States.

In addition to these things, and here I am on ground where I can't tilt too well with the members of the committee who are legally trained, in conjunction with the general counsel's office of the Federal Security Agency and on the recommendation of the National Advisory Mental Health Council, we have prepared and distributed to the States a model admission law for mental hospitals. Now I deliberately do not say "commitment" because this law is written so as to permit a much higher proportion of patients to voluntarily go to a hospital without having to go through commitment proceedings. That is reserved under this law for those who are not able to deal for themselves or who are intractable and still need care and treatment, even though they refuse to go. This was reviewed by the Council of State Governments quite favorably.

During the last few weeks, we have taken what I think is one of the most significant steps forward in the field of mentally ill in hospitals by calling a conference which ended yesterday of State mental hospital administrators and statisticians. We found that the same terms didn't mean the same thing from one State to the next, and they requested that we call this conference in order that we could come to some common understanding of what was meant by certain terms, such as first admission and cure, and so forth. Out of this, however, has come some interesting side benefits such as exchange of information about better ways of utilizing existing funds to make them go further, better treatment methods that are being used in one hospital and may be used in another.

So much for our community services program except to say one thing and that is that we conduct a demonstration clinic in Prince

Georges County, Md., with which I think you are familiar, and we conduct a hospital inspection service which is utilized by the States at their request. We go in and inspect their mental hospitals and make recommendations to the Governor, and only to the Governor, unless he designates someone else. Our hospital inspector has just returned from a 2½-month inspection trip to the State of Illinois.

RESEARCH—DEMENTIA PRAECOX

In the field of research, this committee may remember that last year they recommended, and the Congress approved, funds to inaugurate some research in the field of the role of ACTH, the role it plays in mental disorders. I believe Dr. Sebrell has talked about the general ACTH fund. This is in addition to that fund, and is particularly to study the role of ACTH in one mental disease known as dementia praecox.

Mr. FOGARTY. Is that the most prevalent disease among the mentally disturbed?

Dr. FELIX. Yes.

Mr. FOGARTY. About what percent?

Dr. FELIX. About 40 percent of the hospital beds are filled with sufferers of dementia praecox or schizophrenia. That would be 40 percent of about 550,000 people.

Mr. FOGARTY. Can those people live a natural life with that disease?

Dr. FELIX. Yes, sir; they can live a natural life span. They can live to a ripe old age, and in a very deteriorated state in many cases.

Mr. FOGARTY. They could be affected, say, at age 15 or 20 and live to be 60 in some institution?

Dr. FELIX. That is correct. The name came from the fact that it was thought originally to be a precocious disease. Dementia praecox is a disease of younger people; in fact, one becomes suspicious if one finds a person who is diagnosed as dementia praecox for the first time after about 40 or 45. When you are over 40 or 45, there are other things that can get you, but it isn't likely to be this.

Mr. DENTON. One who suffers from dementia praecox doesn't care what happens.

Dr. FELIX. That is right. Many of them don't care. You can tell them that their mother died or they have inherited a million dollars and you would get the same kind of a reaction. They are what we call flat.

Mr. DENTON. They have no emotion.

Dr. FELIX. That is right. Of course, some of them are quite dangerous. You have what is known as the paranoid type.

Mr. SCHWABE. The violent type.

Dr. FELIX. Yes, sir; those who think that somebody is out to get them, and many times they will cause serious injury to people.

Mr. BUSBEY. What relation will they have to what is known as a nervous breakdown?

Dr. FELIX. A nervous breakdown, Mr. Busbey, is a term which has been used over the years to account for a wide variety of nervous and mental diseases. The common use of the term "nervous breakdown" is what we call the psychoneuroses. Many dementia praecox cases in their early stages look like a neuroses rather than a severe

mental disease, and for that reason they are sometimes called cases of nervous breakdown. One could say, I suppose, in a word that these are among the various kinds of nervous breakdowns. Does that answer your question, sir?

Mr. BUSBEY. Yes.

Dr. FELIX. Well, I hesitate to make a categorical statement, but we are pleased with some early, very tentative findings as a result of our work in this area with ACTH which I mentioned earlier.

We entered into a cooperative project with the Worcester Foundation for Experimental Biology in Shrewsbury, Mass. We entered into a cooperative arrangement there because, as I told the committee last year, we don't have enough space yet at Bethesda.

Mr. HEDRICK. What part of the State is that located in?

Dr. FELIX. It is just a very few miles from Worcester which is not too far from Boston.

Mr. FOGARTY. That is about 30 miles west of Boston? I know where Worcester is, but I don't know where Shrewsbury is.

Dr. FELIX. It is called the Worcester Foundation.

Mr. FOGARTY. The doctor who appeared before us last year, what is his name?

Dr. FELIX. Pincus or Hoagland, one of the two.

Mr. FOGARTY. Hoagland?

Dr. FELIX. Pincus and Hoagland are the two codirectors. Hoagland is the executive director and Pincus is the director of laboratories.

Now with their very first early tentative findings, and as Dr. Van Slyke said this morning, I don't want to be held to this because it may not pan out and next year I may not be able to be as enthusiastic, but at this moment, it looks as though there is reasonable evidence to believe there is a chemical difference in the body between men—they have been studying men, that is why I use that word—suffering from dementia praecox and normal men. This based on the fact that they have found an abnormal substance in these individuals in their urine which is different from that found in normal individuals. It is not affected as far as they know now by the administration of ACTH.

Mr. HEDRICK. Do you have any idea what this is, what it is like?

Dr. FELIX. No; they haven't identified it except to call it beta ketosteroid. There are a number of those and I am sorry, Dr. Hedrick, I am not chemist enough to go much further than that to tell you it it is one of the ketosteroids that are found in the urine of individuals who are laboring under stress.

Dr. TOPPING. They are produced in the body and are hormones which are actually secreted by the body from the cortex of the adrenal glands. As you know, there is something on the order of 26 corticosteroids that are known to be secreted into the body. Dr. Felix is indicating that they have found at the Worcester Foundation that there is still another corticosteroid, and they find this one only in the men with schizophrenia and do not find it in the urine of normal men, the significance being that if this is true, if we verify it and other people can verify it, then you begin to get to the basis of what you can do to alter the chemistry.

Mr. HEDRICK. Does that have anything to do with high blood pressure?

Dr. TOPPING. No; most of them do not. Cortisone is a corticosteroid.

Dr. FELIX. I won't take the committee's time, but one could speculate on what this may mean. Suppose that by isolating this particular substance and injecting it back into animals they find it has a definite effect upon the nervous system which is manifested through psychological processes. It will be most significant step forward, but I wish to repeat, so that there is no misunderstanding, that this is a tentative finding. It looks promising.

MORPHINE SUBSTITUTES

I believe Dr. Sebrell mentioned in his testimony the fact that we are testing morphine substitutes in one of our field laboratories at Lexington, Ky. He may have mentioned that we are testing drugs in the so-called methodone series. It is a substitute for morphine; it is a synthetic. There is one of these which seems to be most significant, known as alpha-acetyl-methodol. It is a derivative of methodol, and these have some advantages. It is a more effective drug taken by mouth than by hypodermic. You can think what that means in times of mass disaster or on the battle front, where you don't have to boil up water to keep a needle sterile or something of that nature. Further than that, one dose is good for between 48 and 72 hours, instead of 4 to 6 hours, as is a quarter grain of morphine. It is a good pain-relieving drug.

Now we have to test this further with regard to its addiction properties. It may be that it is more or it may be that it is less addictive than morphine. We must also determine its toxicity. I am not sure whether Dr. Sebrell told you, but I think you should know that our laboratory ar Lexington is the only laboratory in the world which is presently in position to test narcotics and morphine substitutes. It is the only one set up to do it. We have done it for the last 15 years on a whole variety of drugs. I worked in that laboratory for a number of years myself before I was assigned into my present position, and we have gone through a large series of drugs; many of them may be familiar to you.

PROBLEM OF SLEEPING PILLS

Now this morphine testing isn't the only activity down there about which we can report something as of the last year or two. I think one of the really significant findings has to do with what we call the barbiturate drugs, those drugs which will cause one to sleep, such as luminol, seconal, barbital, amytol, and others. You are probably all familiar with the fact that this has become a serious problem in the country, the use of sleeping pills. It was estimated a year or so ago, and I reported to this committee last year, that the amount of barbiturates manufactured in the United States was sufficient to supply 24 adult doses to every man, woman, and child in the United States that year. You are all familiar, I suppose, with the occasional, though not too infrequent, notice in the paper of someone dying as a result of an overdose, maybe deliberate, maybe not, of these drugs.

Now they have found down there that barbital intoxication is an intoxication similar in many ways to alcohol intoxication in its manifestation and that this addiction is a true addiction, just as an addiction to morphine is a true addiction. That is, the individual is enslaved by this drug. When the drug is abruptly withdrawn after the addiction

has been established, there is a characteristic withdrawal picture consisting of two principal things—there are many others, but the two principal things, the most dramatic, are convulsions, like epileptic convulsions—you couldn't tell one from the other in those instances if you didn't know—and psychosis, an actual mental derangement, which usually clears up, though sometimes not.

Now we have been doing some work with the use of cortisone in the treatment of this addiction, and again I can say that it looks promising. The laboratory has cautioned me not to go further than that at this time, but knowing how conservative they are, I would think I am safe in saying that it looks promising. I wouldn't go further because I would be violating their wishes in that matter.

Mr. FOGARTY. I read a story in the paper a couple of weeks ago about a certain so-called wonder boy who claims that in the new job he now has as an architect in California, he has been sleeping regularly for the first time in 12 years without the aid of sleeping pills.

Dr. FELIX. I didn't read that, Mr. Chairman.

Mr. FOGARTY. He has been taking them for 12 years.

Dr. FELIX. It is not uncommon.

Mr. FOGARTY. That was just a story in the paper.

Dr. FELIX. Yes. It isn't too common, but it is not entirely uncommon, either. I have had patients myself who have used drugs like this for 8 and 10 years, and they are really in a mess.

Mr. FOGARTY. Why do some doctors when you go to them advocate taking a sleeping pill for 6 or 8 days or nights in a row?

Dr. FELIX. Barbiturates, like morphine or like alcohol under certain conditions, or like any other drug, is a perfectly useful and necessary drug when indicated. A friend of mine was telling me just today about an acquaintance of his who developed a mental disease following hospitalization or during hospitalization. It was found that this person had not slept for a number of nights. The person was probably under a great deal of tension, and so forth. In a case like that, it would be quite understandable that they would give the patient a pill or a capsule. I use it unhesitatingly when indicated, but I certainly would not give an unlimited supply or to be used over an unlimited period of time. It has been used in certain of the mental disorders.

In one condition particularly known as anxiety neuroses, in which the patient is in a terrible state of trembling anxiety, we use it sometimes for a couple weeks to get them to sleep and break up this vicious circle.

CONVULSIVE SEIZURES

We have been able in our laboratory here in Bethesda to perfect a technique which was developed elsewhere which makes it possible now to induce convulsive seizures in monkeys, induce them at such times as we can observe in detail all of the natural history of the convulsion, its various phases and the electrical phenomena in the brain, and so forth. Now it looks as though for the first time we are going to be able to study in a primate, a monkey, both the psychological and the physiological elements of epilepsy. We know that both play a role, but we have never been able to separate them. It looks now as though we are going to be able to do so.

NERVE GAS

Now this is fundamental research, but as an aside to this, I might point out something which might have more immediate application. It is known that in certain types of scars, scar tissue of the brain, there is elaborated a greater amount of a substance which tends to control convulsions, to keep all of us from having seizures. It is also known that certain gases which might be used sometimes in some places in this country or elsewhere have as one of their characteristics the reduction of this substance. Yes; I was going to use the work "nerve" gas. Dr. Topping suggested I use the word. Maybe you have heard it.

We have here a convulsion-prone animal in which we can study the effects of small doses of this particular nerve gas and thereby give us a chance to begin to work on antidotes to this. As I say, that is a side reaction. This was basic, fundamental research, and this is one of the applications that comes from it.

I have a number of other points to make, Mr. Chairman, but I believe you have another hearing after this, and unless the committee is interested further, why——

Mr. FOGARTY. It is safe to say, Dr. Felix, then, that we are now making some inroads on the diseases of mental health, is it?

Dr. FELIX. Yes, Mr. Chairman, I think it is quite safe to say, if one remembers that we have a long road to go.

Mr. FOGARTY. I understand that.

Dr. FELIX. We are making inroads; yes, sir. I would say that categorically.

VA PENSIONS TO MENTAL PATIENTS

Mr. FOGARTY. And you said that it is costing the Veterans' Administration now $23,000,000 a month to take care of veterans of the First and Second World Wars?

Dr. FELIX. That is pensions, Mr. Chairman.

Mr. FOGARTY. In pensions?

Dr. FELIX. Pensions. That does not count the hospital bill. That is pensions only. I don't have the figure for the hospital bill. That is just pensions.

Mr. DENTON. $25,000,000?

Dr. FELIX. $23,000,000 a month. It is a quarter of a billion dollars a year, roughly.

Mr. DENTON. That would be almost $300,000,000 a year, wouldn't it?

Dr. TOPPING. About $276,000,000.

Dr. FELIX. It is a little over a quarter of a billion dollars a year.

Mr. FOGARTY. What is the total pension being paid by the Veterans' Administration at the present time, do you know?

Dr. TOPPING. You said $83,000,000 a month.

Dr. FELIX. $85,000,000 a month, in round figures. It may be $100,000 off. I have these in round figures.

Mr. FOGARTY. That is a big problem with them, isn't it?

Dr. FELIX. Yes, sir, it is.

Mr. FOGARTY. That is not counting the construction of these special institutions for the Veterans' Administration.

Dr. FELIX. No; it doesn't count construction, or care, or anything, except just disability payments.

Mr. FOGARTY. Have you any idea what percentage of the number of patients have schizophrenia? Does that average 40 percent?

Dr. FELIX. No, I don't, Mr. Chairman. I wouldn't hazard a guess. I just don't know.

MULTIPLE SCLEROSIS

Mr. FOGARTY. Do you know any more about multiple sclerosis today than you did a year ago?

Dr. FELIX. We are still continuing our epidemiological study that I described last year to you. They are now planning on going back and carefully surveying some of the cases which they turned up in the early studies. They feel thoroughly convinced now that the role of temperature swings and humidity swings is important. They are not convinced that it is infectious. There had been some question of that, but the studies they have done to date on the possibility of their being a virus has not panned out too well. They are not completely washing it out but they are a little dubious.

Mr. FOGARTY. So you haven't made much headway in that field.

Dr. FELIX. Beyond our epidemiological studies, no, sir, not beyond our own program.

Mr. FOGARTY. Is that a progressive disease?

Dr. FELIX. Yes, sir, it is.

Mr. FOGARTY. You know of no way of arresting it?

Dr. FELIX. I know of no way of arresting it; no. They have some spontaneous remissions and we get those all mixed up with arrests when we start to consider treatment.

Mr. FOGARTY. Has any work in ACTH or cortisone been done in this field?

Dr. TOPPING. Mr. Chairman, at the meeting in Chicago on ACTH and cortisone held in early December, two or three papers reported on the administration of ACTH or cortisone in patients with multiple sclerosis. There was some indication that there was perhaps a slight arrest of the disease at the time, a sense of well-being in the individual, where they felt better and were able to do a little more at the time, but there was no indication of any permanent change in the picture of multiple sclerosis. A rather unsatisfactory administration of the drug when you are thinking in terms of trying to have some permanent change for the betterment of the patient.

FUNDS AVAILABLE, 1951 AND 1952

Mr. FOGARTY. Doctor, you have had available in 1951, $10,000,000, and you have had withheld from that $10,000,000, $495,000 under section 1214. Where was that applied?

SECTION 1214 CUT

Dr. FELIX. That was applied throughout. We took some from research projects, some from grants to States, and so forth. We took $27,000 from research projects, $350,000 from grants to States, $53,458 from direct research operations, $2,775 from approval of

training grants, $37,166 from training activities, $21,503 from technical assistance to States, and $3,098 from administration, total, $495,000.

Mr. FOGARTY. For comparable purposes, you had $9,505,000 in 1951. You are asking for $10,800,000 this year, which is an increase of $1,295,000, an increase of nine positions.

Dr. FELIX. Yes, sir.

Mr. FOGARTY. As I understand it, your operations are similar to the heart and cancer institutes.

Dr. FELIX. Yes, sir; that is correct.

Mr. FOGARTY. On grants to States for research projects and fellowships and training in your direct operations——

Dr. FELIX. Yes, sir.

EXPLANATION OF INCREASES

Mr. FOGARTY. Will you briefly go right down this and tell us where those increases occur and what new projects, if any, there are and where these increased positions are going to be used?

Dr. FELIX. Yes, sir. There is an increase of $14,000-odd for mandatory within-grade salary advancements; $1,881 for longevity increases for commissioned personnel; $3,312 for pay in excess of a 52-week base; $520 for social-security taxes; $90,727 to carry into the 1952 fiscal year full employment for those employed during fiscal year 1951 who were first taken on there.

RESEARCH GRANT PROJECTS

Four hundred and sixty-seven thousand dollars in research projects, which will allow for roughly 30 additional grants, an average of about $15,000 a grant.

Mr. FOGARTY. What are they going to be used for?

Dr. FELIX. They will be used both in fundamental research in the field of mental illnesses and in applied research to treatment and prevention.

RESEARCH FELLOWSHIPS

We are asking for a $50,000 increase in the research fellowship appropriation to allow for about 15 additional awards, which will bring us up to approximately 78 research fellows in this area.

TEACHING GRANTS

We are requesting $301,000 for the expansion of teaching programs in these five fields I mentioned earlier, of which $101,000 is liquidating cash. That is applied to the undergraduates in the 42 medical schools, Mr. Chairman. You remember that 3 years ago contract authorization was given us by Congress. This will be the third year of that and bring it up to an average of $15,000 a school for the 42 schools. Those are the ones that are receiving it.

Mr. FOGARTY. Will you put a list of those 42 schools into the record?

Dr. FELIX. Yes, sir.

(The list of schools referred to is as follows:)

Undergraduate psychiatry training grants approved by States and institutions

	Fiscal year 1950	Fiscal year 1951	Fiscal year 1952	Total
1. Alabama: Medical College of Alabama (Birmingham)	$6,707	$12,500	$15,000	$34,207
2. Arkansas: University of Arkansas, School of Medicine (Little Rock)	10,000	12,500	15,000	37,500
3. Connecticut: Yale University (New Haven)	9,720	12,420	14,580	36,720
4. Georgia: Emory University (Atlanta)	10,000	12,500	15,000	37,500
5. Illinois: Loyola University, School of Medicine (Chicago)	9,396	12,420	14,364	36,180
6. Iowa: State University of Iowa (Iowa City)	9,396	12,420	14,823	37,179
7. Kansas: University of Kansas (Kansas City)	10,000	12,480	14,980	37,460
8. Louisiana:				
Louisiana State University (New Orleans)	10,000	12,300	15,000	37,300
Tulane University (New Orleans)	10,000	12,500	15,000	37,500
Total, Louisiana	20,000	24,800	30,000	74,800
9. Maryland:				
University of Maryland (Baltimore)	10,000	10,000	10,000	30,000
John Hopkins University (Baltimore)	9,828	10,422	14,742	34,992
Total, Maryland	19,828	20,422	24,742	64,992
10. Michigan:				
University of Michigan (Ann Arbor)	10,000	10,600	11,500	32,100
Wayne University (Detroit)	10,000	12,500	15,000	37,500
Total, Michigan	20,000	23,100	26,500	69,600
11. Minnesota: University of Minnesota (Minneapolis)	10,000	12,500	15,000	37,500
12. Missouri: Washington University (St. Louis)	10,000	12,500	15,000	37,500
13. Nebraska: University of Nebraska (Lincoln)	9,936	12,420	14,904	37,260
14. New Hampshire: Dartmouth Medical School (Hanover)	1,500	1,500	1,500	4,500
15. New York:				
Albany Medical College (Albany)	10,000	12,500	15,000	37,500
Long Island College of Medicine (New York)	10,000	12,500	15,000	37,500
New York University (New York)	10,000	12,500	15,000	37,500
University of Rochester (Rochester)	10,000	12,500	14,904	37,404
Syracuse University, College of Medicine (Syracuse)	9,936	12,420	14,688	37,044
Total, New York	49,936	62,420	74,592	186,948
16. North Carolina: Bowman Gray School of Medicine of Wake Forest College (Winston-Salem)	10,000	12,500	15,000	37,500
17. Ohio:				
Ohio State University (Columbus)	10,000	12,500	15,000	37,500
Western Reserve University (Cleveland)	10,000	12,500	15,000	37,500
Total, Ohio	20,000	25,000	30,000	75,000
18. Oklahoma: University of Oklahoma (Oklahoma City)	10,000	12,500	15,000	37,500
19. Pennsylvania:				
Hahnemann Medical College (Philadelphia)	10,000	12,500	15,000	37,500
Jefferson Medical College (Philadelphia)	9,900	12,500	15,000	37,400
Pennsylvania Women's Medical College (Philadelphia)	9,990	12,312	15,000	37,302
Temple University (Philadelphia)	10,000	12,500	15,000	37,500
Total, Pennsylvania	39,890	48,812	60,000	149,702
20. Tennessee:				
University of Tennessee (Memphis)	10,000	12,300	15,000	37,300
Meharry Medical College (Nashville)	10,000	12,463	15,000	37,463
Total, Tennessee	20,000	24,763	30,000	74,763
21. Texas:				
Baylor University (Houston)	9,720	11,432	13,824	34,976
Southwestern Medical College (Dallas)	10,000	12,500	15,000	37,500
University of Texas (Galveston)	10,000	12,000	12,000	34,000
Total, Texas	29,720	35,932	40,824	106,476
22. Utah: University of Utah (Salt Lake City)	10,000	12,500	15,000	37,500
23. Vermont: University of Vermont (Burlington)	9,936	12,906	14,310	37,152
24. Virginia: Virginia Medical College (Richmond)	10,000	12,500	15,000	37,500
25. Washington: University of Washington (Seattle)	10,000	12,500	15,000	37,500

Undergraduate psychiatry training grants approved by States and institutions—Continued

	Fiscal year 1950	Fiscal year 1951	Fiscal year 1952	Total
26. District of Columbia:				
George Washington University (Washington, D. C.)	$10,000	$12,500	$15,000	$37,500
Georgetown University (Washington, D. C.)	10,000	12,500	15,000	37,500
Howard University (Washington, D. C.)	9,497	6,200	14,000	29,697
Total, District of Columbia	29,497	31,200	44,000	104,697
Grand total	406,002	499,015	600,119	1,505,136

TRAINING GRANTS

Dr. FELIX. We are requesting $350,000 increase for training stipends, which will allow for about 163 additional stipend awards here again in the five fields, which will bring us up to about 685 to 688 training stipends.

GRANTS TO STATES

There is a slight reduction of $100,000 in the item "Grants to States."

DIRECT RESEARCH OPERATIONS

We are asking for $95,120 increase in direct research, and there is where the nine new positions are, Mr. Chairman.

These nine new positions are as follows: We are asking for one senior investigator and two supporting personnel for our dementia praecox, that is, schizophrenia studies. We are asking for two senior staff members and one supporting person for our staffing the clinical center. We are asking for two supporting personnel, technicians, for our drug and barbiturate studies at the Lexington laboratory. We are asking for one technical person for our continued statistical studies of incidence of mental disease.

REVIEW OF GRANTS

We are requesting $6,760 increase in the item review and approval of research and training grants. The principal part of this is for the third of three conferences, on psychosurgery, the first two having been held. (That is the operation that I have described in which they cut the brain. It is desired to find out how useful this operation is, when it is indicated, what kind of patients should be chosen for it. and so forth); and there is $2,600 in there to make possible more project site visits so we can go out to these research projects and training projects and see them personally and see what is happening.

MISCELLANEOUS INCREASES

We are asking for $1,000 increase in our training activities. That will allow for about an additional day on a number of training institutes. We are asking for $7,850 increase in technical assistance to States. This is the program which allows us to have consultants in the regional offices who are available to the States on their request

to consult with them with regard to the mental health programs, and so forth, and we are asking for $5,200 increase in the item of administration. The total is $1,295,000.

RESEARCH ON MULTIPLE SCLEROSIS

Mr. FOGARTY. Doctor, in our report of a year ago, we urged that you people use not less than the amount set up for the research in the multiple sclerosis, and if circumstances permit, to give even greater attention to it.

Dr. FELIX. Yes, sir, Mr. Chairman. In the fields of multiple sclerosis, epilepsy, cerebral palsy, and other neurological diseases, through direct research fellowships, research project grants, we spent a little over $200,000.

Dr. TOPPING. May I add that following the instructions from the committee in the committee report of last year, we did have budgetary reserves against this appropriation, which made it more difficult to meet with the request of the committee. However, we have met with the committee's request.

Mr. FOGARTY. Thank you.

PROGRESS IN TREATMENT OF LOCOMOTOR ATAXIA

Mr. SCHWABE. Doctor, what progress has been made in the treatment of locomotor ataxia, paresis, and general paralysis? All three apply to about the same disease; do they not?

Dr. FELIX. Yes, sir.

Mr. SCHWABE. What progress has been made in connection with the treatment of that disease?

Dr. FELIX. Considerable progress has been made, Mr. Schwabe, both in the treatment and, of course, in the prevention through the venereal disease program.

Mr. SCHWABE. Of course, that is not your end of it, though, the venereal disease program. You collaborate with them, but that is another field primarily; is it not?

Dr. FELIX. That is correct.

Mr. SCHWABE. You trace, if I remember, some 98 percent of this disorder as resulting from syphilis.

Dr. FELIX. That is correct, sir, with the exception of——

Mr. SCHWABE. A predisposing cause, I believe you called it.

Dr. FELIX. That is correct, with some exception of the cases of locomotor ataxia which is connected with some other disease, such as pernicious anemia.

Mr. SCHWABE. Would you say that all cases are due to syphilis?

Dr. FELIX. Certainly, the condition known as general paresis and the condition commonly thought as locomotor ataxia are due to syphilis.

Dr. TOPPING. Mr. Schwabe, I think eventually—when I say eventually, I mean 20 years from now—we may see some effect of those public-health procedures of venereal-disease control in improved treatment. There will be fewer people in the hospitals that will have general paresis or, as you say, locomotor ataxia, because they will have had their syphilis cured earlier and not go to that late stage in syphilis.

Mr. SCHWABE. However, sometimes the latent situation there may not have been entirely cured as the doctor may have thought.

Dr. TOPPING. That is correct, sir.

Mr. SCHWABE. But in this disease, this form of mental disease, or whatever you term it, in the latter stages or any stage of it after it is well developed and diagnosed, I am asking what progress have you made? Can you give us a little more or less statistical information along that line?

Dr. FELIX. I don't have any statistics on them, Mr. Schwabe, the cases in which there has been damage to the brain or to the spinal cord.

Mr. SCHWABE. Where there is tissue destruction or deterioration, you can't repair it, of course.

Dr. FELIX. We can't repair it. All we can do is to stop it.

Mr. SCHWABE. Nature will not compensate for it?

Dr. FELIX. Nature will repair but will not replace the functional elements in the system.

Mr. SCHWABE. It may heal it over or you may arrest the progress, but you do not replace the destroyed tissue?

Dr. FELIX. That is right, sir. In those cases in which there has been no destruction, it is quite rare to see a case of a full blown mental disorder occur because of the use of penicillin particularly and some of the other similar drugs which are used to destroy the germ of syphillis. I personally haven't seen a new case of general paresis, syphillis of the brain, in several years. I haven't seen a new case, and when I was in training, it was a common occurrence. It was one of the common things we got. We are in about the same position there as they are, let's say, with smallpox. I understand medical schools are having trouble nowadays finding a case of smallpox to demonstrate to medical students. We are in just about that same condition with new cases, the full blown kind of cases.

Mr. SCHWABE. Generally speaking, opiates are not resorted to very much anymore in your treatment of any sort of mental diseases except just temporarily; is that not true?

Dr. FELIX. That is very true, Mr. Schwabe. Unless there is pain, we don't recommend it.

Mr. SCHWABE. Yes, or a case where you may use it temporarily, you may administer a narcotic.

Dr. FELIX. Even then we wouldn't administer a narcotic. We will administer one of the barbiturates, perhaps, or even preferable to that are hydrotherapautic methods.

PROGRESS IN HYDROTHERAPY

Mr. SCHWABE. I was going to ask you the next question. How are you progressing with hydrotherapy?

Dr. FELIX. That is being used more and more, so much so, I might say, that we feel now that we can categorically state that mechanical restraint is unnecessary in a mental hospital where you have a properly trained staff, an adequate staff and adequate therapeutic facilities. Of course, you may use some of the barbiturates once in a while.

Mr. SCHWABE. That is just temporarily for acute flare-ups or something of that sort.

Dr. FELIX. Yes, sir.

Mr. SCHWABE. But the equipment is rather simple for therapy and inexpensive.

Dr. FELIX. That is right.

Mr. SCHWABE. And most of the institutions and State hospitals are so equipped now, aren't they?

Dr. FELIX. They are equipped, yes, sir.

Mr. SCHWABE. After using hypertherapy, you seldom have or at least you have comparatively few occurrences of violence; isn't that true?

Dr. FELIX. That is true, Mr. Schwabe. I would like to go back to one thing you said, if I may, sir. You said that hospitals are equipped with these facilities. They are. The tragedy is they don't have the personnel to use them. One can't leave a patient in a continuous flow bath. There is a valve which keeps the water at the proper temperature. We never trust those mechanical devices. Once in a while they go berserk at the wrong time and you can burn a patient. So you have to have a person there for that reason, so that a person doesn't slide down under and try to drown himself, and many hospitals don't have the personnel.

Mr. SCHWABE. But the method is not new, as I recall it. It has been used in our State institutions for more than 30 years.

Dr. FELIX. That is right, sir.

Mr. SCHWABE. But it was comparatively new some 30 or 35 years ago.

Dr. FELIX. That is correct.

Mr. SCHWABE. Now this new operation that you have described, that is a frontal brain operation, is it not?

Dr. FELIX. Yes, sir.

SHOCK TREATMENTS

Mr. SCHWABE. With reference to these shock treatments, as you say, you don't know what they do, but they do something. It affords relief. There are so many of these where you find some types of cases responding to one type better than to others, do you not?

Dr. FELIX. That is right, sir.

Mr. SCHWABE. And don't you attempt different shock treatments on the same individual where you fail to get results sometimes in the application of the first or second?

Dr. FELIX. That is true, we have to, because we don't know what causes it. For instance, we use electric shock particularly on depressed patients, those who are deeply despondent or suicidal. We use insulin shock particularly in those that don't show this emotion, such as the dementia praecox case, Mr. Denton, we were discussing.

Mr. SCHWABE. Now, with reference to these cases where progress of the disease has been arrested. Part of the therapy there involved is prabably psychiatric therapy, is it not, teaching the patient to live with his obsessions and troubles, and so forth, and to recognize that he has certain limitations beyond which he dare not go or else he goes over the line and into trouble; is that right?

Dr. FELIX. That is correct, sir.

IMPOSTERS IN THE SCIENCE OF PSYCHIATRY

Mr. SCHWABE. The science of psychiatry or the profession has had a lot of imposters in the field, just the same as charlatans in other lines. Isn't that one of your big problems?

Dr. FELIX. It is, Mr. Schwabe. Psychiatry has had more than its fair share, I think.

Mr. SCHWABE. And probably still has.

Dr. FELIX. I am afraid that is right. They have done no good to the public. Too many people lump us all in the same basket, and it is hard.

Mr. SCHWABE. Are any steps being taken and results being obtained to rid the profession along this specialization of that type of people? I call them charlatans in the profession. Now, I am just thinking there should be, if there hasn't been anything done. Is there any progress being made to relieve the public of such imposters, and the regular professional men of the impositions that these men are practicing?

Dr. FELIX. Yes, sir. The American Medical Association has been active for a number of years in trying to turn up such imposters and to either prosecute them or get them prosecuted.

Mr. SCHWABE. It is pretty hard to get evidence in those cases, isn't it, in many instances?

Dr. FELIX. It is, unless they make false claims and you can catch them at it or where they are working interstate.

Mr. SCHWABE. But their work with a patient is so intimate that it is difficult, is it not, to get the evidence, as you can in many other cases of irregular practice?

Dr. FELIX. Yes, sir. We try to meet that by setting up standards for practice in this area.

Mr. SCHWABE. That is what I wanted you to tell the committee.

Dr. FELIX. There has been set up in the field of neurology and psychiatry, as in other branches of medicine, such as pediatrics, physicians of children, etc., an examining board, the American Board of Psychiatry and Neurology which has on it 12 members, 4 appointed from the American Medical Association, 4 from the American Psychiatric Association and 4 from the American Neurological Association. All of us who aspire to be called a specialist in this field must appear before that board and be examined and satisfactorily meet their examination in order to be assured a certificate by them. The certificate is recognized throughout the profession and throughout the allied professions. For instance, it is not uncommon for me to be asked when I appear as an expert witness, "Let us see your qualifications," and by and large, if you inform the court that you are certified by the American Board of Psychiatry, that is ample evidence of your qualifications as a specialist in that area. The obtaining of that certificate is not easy. It requires 3 years of postgraduate training in an approved medical center for training, plus two additional years of satisfactory experience before you can even apply for a certificate, and one must have completed his medical work in a class A medical school, a doctor's degree and had at least a year's internship before he can start that residency. So it means a minimum of 6 years after medical school before one can even apply for the examination.

Mr. SCHWABE. Are there many people going into this line of specialization?

Dr. FELIX. Yes, sir; there are more aspirants for training than there are places to train them.

Mr. SCHWABE. Is that right?

Dr. FELIX. Yes, sir.

Mr. SCHWABE. A few years ago you had a dearth of applicants; did you not?

Dr. FELIX. That is correct. I think there are several reasons for this. One is more physicians are aware of the possibilities in this field because of the way they teach it in medical school. Also, there is opportunity for active clinical practice now, outside of just the walls of a mental hospital. They can work there also, and there is a lot of community work with the public which many doctors like which is available.

PREVENTION OF MENTAL DISEASES

Mr. SCHWABE. I want to ask one more question to explore one more field a little bit and have you tell us. What are you doing in your special line of work as comparable to preventive medicine, I guess you would call it?

Dr. FELIX. Preventive medicine?

Mr. SCHWABE. In the other lines of the medical profession—in other words, what are you doing among children, and so forth, to prevent the occurrence of mental diseases, particularly as they grow older which might have been prevented if timely diagnosis and treatments had been made.

Dr. FELIX. We are working through several channels in that, Mr. Schwabe, both directly and the States themselves on their own and with the assistance of this grant, both. We are working energetically with the schools.

Mr. SCHWABE. What are you doing there? That is what I want to know.

Dr. FELIX. We hold refresher courses or orientation courses, seminar courses for teachers, usually starting with the principals. After all, you have to get them to see the light before you go down the line and then working with the school teachers themselves, with two things in mind: To help them to identify accurately emotional difficulties in children and, secondly, to give them some means of dealing with them. In other words, a certain procedure is thought a good way to deal with the child, and all children aren't exactly the same. Principally, the thing that is important to get across is that children aren't miniature grown-ups. They don't think like grown-ups. They are not mature.

Mr. SCHWABE. There is too much an inclination to rationalize on the same plane with adults is what you mean.

Dr. FELIX. That is correct, sir.

Mr. SCHWABE. And, likewise, with any patient with a mental disorder.

Dr. FELIX. That is right. You can't treat them as adult, normal people; that is correct, Mr. Schwabe. We have been working for some time through one division particularly of the State health departments known as the Maternal and Child Health Division, where

they deal with new mothers and their babies and with well babies and well children that come to their clinics. One very profitable activity in that particular area has been training public-health nurses in mental health and have them work in the new-mother clinic, where the mothers come back with their new baby and they teach them how to nurse it and how to bathe it and all that. In addition to this, tell them something about how they can expect their babies to behave when they are at a certain age and that they are not going to be the same at another age. They progress.

We have had some interesting experiences in several places. I say "We." I am talking about the whole field, not just the Institute of Mental Health, working through what I think is one of the most enlightened groups of people in the country, the presiding judges of the juvenile courts and the probation officers. They see a phase of this problem which——

Mr. SCHWABE. An early phase but sometimes not early enough.

Dr. FELIX. That is right. It is amazing how many early cases they get. They are not all hardened criminals, by any means, that they get there. For instance, as one activity in that direction, we provide, on a reimbursable basis, psychiatric service to the Juvenile Court of the District of Columbia, where one of our own doctors and one of our psychologists work down there with them. Then, of course, we work directly with parents through providing material for women's discussion clubs and talking to civic groups, and places like that. PTA groups have been a very important area. I had an interesting session myself within the last week talking to a PTA group, showing them the film which was produced last year by the National Institute of Mental Health called Preface to a Life, which shows how a child grows during the first years and how things can be done.

Mr. SCHWABE. Have films like that been distributed throughout the country?

Dr. FELIX. Pretty well; yes, sir. That is the only one the Federal Government has put out, but there are others put out by State and private organizations, some by some of the commercial organizations, such as insurance companies, and so forth, and baby-food companies, and so forth.

Mr. SCHWABE. Well, isn't it true that you claim and the men in your line of work say that you can't begin too early with a child to watch for any mental abnormalities and manifestations?

Mr. FELIX. That is so true, Mr. Schwabe, that I would like to double underscore it. We recently collaborated in a study in a county of the United States, which I will not further identify, which worked with the school teachers. We asked them to go through their ninth-grade students and give an estimate as to how many of those children were going to have social or emotional difficulties before they reached adulthood. The average estimate in this county, a partly rural, partly urban county, was 10 percent of the ninth-grade students are going to have either social or emotional difficulties. Now, "social" includes delinquency.

Mr. SCHWABE. But that is almost as far as you can go statistically with regard to the inference; is it not?

Dr. FELIX. That is right, sir.

Mr. SCHWABE. You spoke awhile ago of teaching young mothers how to nurse their children and take care of them and fondle them,

and so forth. Have you discovered anything for the benefit of the public or any study been made or research along the line of results of mothers who nursed their children and those who do not breast-feed them?

Dr. FELIX. I don't know of any real statistical studies. Dr. Gesell, whom you may know of, from Yale University, who wrote several books, Dr. Benjamin Park, and others have stated as a result of their observations over many years of clinical experience that it isn't so much whether the child nurses from the breast or nurses from the bottle as to how the child is treated. For instance, you put a baby in a basket and prop a bottle up with a pillow and go off and leave the baby. That is no good. But a baby who is given——

Mr. SCHWABE. Maternal fondling.

Dr. FELIX. That is correct, sir. It doesn't matter whether the nipple is actually flesh and blood or rubber, provided the mother feeds it.

Mr. SCHWABE. But you are making studies along that line to determine what the true motherhood fondling means as compared with what the absence of it does.

Dr. FELIX. Yes, sir.

Mr. SCHWABE. And, so far, do you have any statistical information or anything for the benefit of the public as a result of your studies on that line?

Dr. FELIX. Not on human beings as yet, Mr. Schwabe. I think I told this committee last year—maybe it was the year before—about a very interesting experiment that had been done on one kind of animal, if you would be interested in hearing it. A man took goats who had twinned—it is rather rare; it took him awhile to build up the series who had twin kids. They took one of these kids and separated it from the mother and took the other kid and left it with the mother, and subjected these two twins, which we would assume to be identical, and probably from the same ovum—and subjected them to the same type of situation, startling noises, electric shocks, and so forth. The little fellow that was with the mother would become startled and bleat and run around and tremble, then come and cuddle up against the mother. The one that was not with the mother, after a few of these stimuli, became rigid and would stand almost in a cataleptic-like state in its cage and died in about a week and a half. On autopsy, the little animal appeared to be completely dehydrated. It hadn't taken food or water. The only difference was that one was with its mother and could get a little comfort, a little relaxation; the other one had no one to whom to turn.

That is an interesting experiment. It points up some of the tragedies of the children in this world that have been displaced not only elsewhere but in our own country. I think it is a very significant experiment.

Mr. SCHWABE. Do you contemplate experimenting further along that line with humans or are you making comparative studies of it?

Dr. FELIX. Yes, sir. There is one project going on now, studying some of the reactions of displaced children brought to this country who have been separated from their parents for a while and see how they behave in comparison with people from that same country who, even though they were subjected to a lot of maybe very unhappy things, were able to keep together, particularly mother and child kept together, but I have no data on that as yet.

SHOCK TREATMENTS

Mr. BUSBEY. Doctor, in regard to the shock treatments, do you have any data as to the length of time the average cure is effective when patients are released from sanitariums and hospitals?

Dr. FELIX. That is some of the most difficult data to get hold of, Mr. Busbey. Some come back within 6 months or a year; some come back later and some are lost track of. If I weren't on the record, I would hazard a guess, but some of my collegues may read the record, and I am sure they would disagree with me.

Mr. BUSBEY. Let's go off the record a minute, then.

(Discussion off the record.)

Mr. BUSBEY. Are some of these patients that have taken these shock treatments permanently cured?

Dr. FELIX. That is right, Mr. Busbey. Particularly is this true in the case of what is known as involutional melancholia. The effect there is often miraculous, and they don't recur; that is, the depressions which occur with the change of life.

Mr. BUSBEY. I visited the Downey Hospital at North Chicago, which is a large veterans' mental institution, when they were first starting these shock treatments, and I saw them using this method of treatment, and they have been very successful. Unfortunately, they had no data at that time. What has been done to get the public at large to realize that a mental disease is a disease, the same as tuberculosis or cancer or heart trouble or any other disease?

EFFORTS TO EDUCATE THE PUBLIC ON MENTAL DISEASES

Dr. FELIX. We have done everything we can, Mr. Busbey, and, I think, with results. First, as one of my friends puts it, we have done it by means of the epistle and the apostle. We have done it by the written word and by the spoken word. This has paid off in one way and another. The hospital administrators aren't so sure, because in this conference we held this week one of the comments was the number of cases they are getting that are early cases in the hospitals, where they have voluntary admissions because people aren't afraid any more. They are not afraid of mental illness as they were, and their relatives aren't so afraid and they don't feel so ashamed about it. We particularly try to point out that it is a ridiculous situation when a person is ashamed of a condition over which they have no control.

Certainly, I would be much more ashamed of acquiring a disease as a result of filth or something like that than I would a disease which is as a result of either my own internal physiology or the force of circumstances over which I have no control. I think we are getting places. We are certainly getting places in a very definite way with regard to the young mothers and the young children. They are quite alert. There has been a best seller for several years as you know, Dr. Spock's book on Infant and Child Care, which is shot through and through with the mental-health aspects of it.

Mr. FOGARTY. You are educating the patient, too, to talk about it—aren't you?—when he gets back into his home.

Dr. FELIX. That is right.

Mr. FOGARTY. Off the record.

(Discussion off the record.)

Mr. BUSBEY. Doctor, what was the nature of this survey you have recently completed in the State of Illinois?

Dr. FELIX. The man just came in yesterday, Mr. Busbey. I haven't had a chance to talk to him. The Governor requested a survey of all the hospitals in the State; the mental hospitals, that is. I just saw him and said "Hello." I don't know anything yet.

Mr. BUSBEY. When he submits his report, would it be possible to get a copy of that so I could make a personal study of it?

Dr. FELIX. We submit that to the Governor. That is the way we do it, Mr. Busbey. We have usually left it to the Governor to make the release. We consider it as a service that the State asks for.

Mr. BUSBEY. I could write him and state the use I want to make of it, and he would in all probability release it to me. That is all, Mr. Chairman.

MENTAL DISEASES THAT MAY BE HEREDITARY

Mr. SCHWABE. Doctor, are there any forms of mental diseases that are considered by you people, men in your profession, as hereditary?

Dr. FELIX. None of the strictly mental diseases. There are one or two things which look suspicious, but we can't pin it down. We find around 20 to 25 percent of dementia praecox patients have relatives that have had it; that is, lineal antecedents.

Mr. SCHWABE. In nearly all of the cases where a patient has been committed to an institution, especially a public institution, that background or historical data is taken and preserved; is it not?

Dr. FELIX. In most all of the hospitals, certainly all of the good hospitals, they have a social-service department that gets all that material.

Mr. SCHWABE. That is done in court, where they are committed, too, is it not? That is my observation, generally.

Dr. FELIX. I think in most States, not all States, but most States.

Mr. SCHWABE. Which affords an excellent opportunity for the study that I am touching upon, and we have in my years of experience and observation been inclined to caution the oncoming generation about intermarrying sometimes with a progeny of people who have had mental diseases; and, of course, we didn't always know the type of disease they had, because they all went to the same institution, per chance, and that is the reason I am raising the question and wanting to know what your latest studies revealed with reference to hereditability.

Dr. FELIX. We can't categorically state that any of them are as I said.

Mr. SCHWABE. But you can say—can you not?—that there seem to be weaknesses or propensities in the offspring.

Dr. FELIX. That is true, Mr. Schwabe.

Mr. SCHWABE. And a more likelihood of their breaking, as we say, at middle age or a little beyond middle age.

Dr. FELIX. Yes.

Judge MCGRATH. Were you fairly well satisfied with that survey in this unnamed county?

Dr. FELIX. Yes; I was, because we always sized up the teachers, and, by and large, they were intelligent and stable and well trained.

Judge MCGRATH. How were they well trained?

Dr. FELIX. They were not only well trained as teachers but they had a considerable amount of educational psychology in their training, and we gave them some refresher work as to what to look for over a period of several weeks, more than that, a couple months, before they started looking.

Judge MCGRATH. Then you just didn't select a teacher without any specific training?

Dr. FELIX. No, sir. These were all of the teachers teaching there.

GRANTS TO STATES

Mr. FOGARTY. I will ask that the allocations of grants to the States as shown on page 80 be put in the record at this point.

(The list of allotments follows:)

Allocation of grant-in-aid funds for mental health, fiscal year 1951

State or Territory	Allocation	State or Territory	Allocation
Alabama	$68,800	New Jersey	$90,400
Arizona	20,000	New Mexico	20,000
Arkansas	47,900	New York	249,700
California	190,000	North Carolina	89,600
Colorado	23,800	North Dakota	20,000
Connecticut	37,400	Ohio	150,200
Delaware	20,000	Oklahoma	51,400
District of Columbia	20,000	Oregon	32,500
Florida	50,500	Pennsylvania	206,900
Georgia	72,700	Rhode Island	20,000
Idaho	20,000	South Carolina	48,500
Illinois	154,100	South Dakota	30,000
Indiana	79,200	Tennessee	71,300
Iowa	54,700	Texas	156,400
Kansas	39,300	Utah	20,000
Kentucky	67,400	Vermont	20,000
Louisiana	58,400	Virginia	65,700
Maine	20,000	Washington	46,900
Maryland	40,600	West Virginia	42,900
Massachusetts	88,700	Wisconsin	66,400
Michigan	119,800	Wyoming	20,000
Minnesota	60,100	Alaska	20,000
Mississippi	55,500	Hawaii	20,000
Missouri	79,200	Puerto Rico	56,900
Montana	20,000	Virgin Islands	20,000
Nebraska	26,200		
Nevada	20,000	Total	3,200,000
New Hampshire	20,000		

FUNDS FOR LIQUIDATION OF PRIOR CONTRACTS

Mr. FOGARTY. Now you have $823,000 for liquidation cash. Where does that show up in the justifications?

Mr. HARLOW. It isn't in the justifications, Mr. Chairman. It appears in the two items. $223,000 of it is in the "Research project" item and $600,000 in the "Expansion of teaching subjects." I might say in that connection that since this budget was made up we found that, instead of $823,000, we will need only $573,000 for that purpose. That is a reduction of $250,000 which can also be taken in the total amount to be appropriated, reducing our over-all estimate from $10,800,000 to $10,550,000.

Mr. FOGARTY. Thank you, Mr. Harlow.

Are there any further questions?

Do you have any further statement to make, Dr. Felix?

Dr. FELIX. Only, Mr. Chairman, to thank the committee for the time they have taken, and I express my appreciation.

THURSDAY, MARCH 1, 1951.

CONSTRUCTION OF RESEARCH FACILITIES

WITNESSES

DR. JACK MASUR, ACTING DIRECTOR, CLINICAL CENTER, NATIONAL INSTITUTE OF HEALTH
ROY L. HARLOW, CHIEF FINANCE OFFICER

CONSTRUCTION OF RESEARCH FACILITIES

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
Appropriation or estimate	$17,000,000	$15,125,000	$18,590,000
Applied to contract authorization	−13,100,000	−11,100,000	−11,450,000
Contract authorization	12,900,000	350,000	
Prior year balance available:			
Appropriated funds	1,366,729	4,451,164	4,500,000
Contract authorization	25,630,000	20,323,133	5,593,133
Total available for obligation	43,796,729	29,149,297	17,233,133
Balance available in subsequent year:			
Appropriated funds	−4,451,164	−4,500,000	−143,133
Contract authorization	−20,323,133	−5,593,133	−800,000
Total obligations	19,022,432	19,056,164	16,290,000

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
1. Design, supervision, etc	$501,931	$535,000	$421,000
2. Construction	18,452,713	16,465,000	8,129,000
3. Purchase and installation of equipment and supplies		2,000,000	7,740,000
4. Incidental expenses	67,788	56,164	
Total obligations	19,022,432	19,056,164	16,290,000

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
PUBLIC HEALTH SERVICE			
Total number of permanent positions	12	29	33
Full-time equivalent of all other positions	1		
Average number of all employees	12	20	30
01 Personal services:			
Permanent positions	$52,938	$79,214	$88,816
Part-time and temporary positions	1,645	1,000	
Regular pay in excess of 52-week base	91		384
Total personal services	54,674	80,214	89,200
02 Travel	5,987	4,000	
03 Transportation of things	364	4,300	4,000
04 Communication services	229	100	
07 Other contractual services	683	500	
08 Supplies and materials	1,173	1,000	
09 Equipment	4,678	1,966,000	7,645,500
15 Taxes and assessments		50	1,300
Total obligations	67,788	2,056,164	7,740,000

Obligations by objects—Continued

Object classification	1950 actual	1951 estimate	1952 estimate
GENERAL SERVICES ADMINISTRATION			
02 Travel	$1,050	$1,500	$1,000
03 Transportation of things	16	2,500	1,500
06 Printing and reproduction	22,139	25,000	15,000
07 Other contractual services	3,195	5,000	3,000
Performed by "Construction services, General Services Administration"	474,456	500,000	400,000
08 Supplies and materials	837	1,000	500
09 Equipment	238		
10 Lands and structures	18,452,713	16,465,000	8,129,000
Total obligations	18,954,644	17,000,000	8,550,000
SUMMARY			
Total number of permanent positions	12	29	33
Full-time equivalent of all other positions	1		
Average number of all employees	12	20	30
01 Personal services:			
Permanent positions	$52,938	$79,214	$88,816
Part-time and temporary positions	1,645	1,000	
Regular pay in excess of 52-week base	91		384
Total personal services	54,674	80,214	89,200
02 Travel	7,037	5,500	1,000
03 Transportation of things	380	6,800	5,500
04 Communication services	229	100	
06 Printing and reproduction	22,139	25,000	15,000
07 Other contractual services	3,878	5,500	3,000
Performed by "Construction services, General Services Administration"	474,456	500,000	400,000
08 Supplies and materials	2,010	2,000	500
09 Equipment	4,916	1,966,000	7,645,500
10 Lands and structures	18,452,713	16,465,000	8,129,000
15 Taxes and assessments		50	1,300
Total obligations	19,022,432	19,056,164	16,290,000

Mr. FOGARTY. Dr. Masur, you gave us a pretty good résumé at the National Institute the other day, so I think we all have an idea of what this Clinical Center is for. Do you have a statement for the committee, Doctor?

GENERAL STATEMENT

Dr. MASUR. Mr. Chairman, I would like to give you a brief résumé of the present status of the financial arrangements for the building. I think perhaps this chart may help you follow it.

You will recall that the other day we described to you the laboratory hospital building for the investigation and treatment of patients with heart disease, cancer, psychiatric conditions, neurological diseases metabolic diseases and infectious and tropical diseases. These reprints from an article in the November 1949 issue of Hospitals will provide more details for those who may be interested in a fuller account of the Clinical Center.

Last year we stated that, in an agreement with the Bureau of the Budget, the financing of this project had been arranged in three separate stages, so that we would not be required to ask either for contract authorization or cash in advance of the dates that we would need it. Today, in bringing this project up to the present time, the presentation consists of a request for cash to pay for work to be completed in 1952; secondly, a request for funds for equipment and initial supplies and, finally, two emergency items which are part of stage 1, which, however, are still within the over-all cash authorization for the main clinical center building.

Mr. FOGARTY. What is the over-all; could you say?

Dr. MASUR. For stage 1, sir, which consisted of the clinical center building, the power plant, the isotope laboratory and the utility building, the over-all limitation, cost limitation was $40,000,000. If you think it might be helpful, sir, we might run through this chart, if there are any questions.

Mr. FOGARTY. I was going to look at the figures in this chart, anyway, and insert it in the record.

Dr. MASUR. Very well, sir, we will do that.

STAGE 1 REQUEST—1952

For today, our presentation in stage 1 consists of a $400,000 item as a cash request which would bring our total available for obligation up to $39,230,000. The $400,000 item consists of two parts, the first, for provision for emergency electrical current for running the clinical center building and some of the existing laboratories in the event of a power failure due to a local catastrophe. In a recent experience in the Bethesda area, when the local Bethesda Pepco power plant blew up, we realized that it would not be sufficient for us to rely on the three sources which we had previuosly planned for. We have long recognized the need for an independent source of at least a minimum amount of current; but, as a calculated risk early in the building program, we did not feel, particularly in view of our commitment to this committee that we would try to keep as far below the $40,000,000 limitation as we could, that we should at that time invest the amount of money required for an auxiliary turbo-generator. The development of a defense situation indicates that that is no longer prudent, and we are, therefore, asking for this $400,000, first, for auxiliary current sources and, second, for the protection of the window of the building to avoid damage to patients and personnel from the effects of blast in some part of the Washington area.

In stage 2, there is a request of cash for $1,100,000. If I may go back for one moment, sir. The $400,000 to which I referred in stage 1 is a request for obligational cash. The liquidating cash amount is $10,000,000, for a total in that stage of $10,400,000.

STAGE 2 REQUEST—1952

In stage 2, we are not asking for additional obligational cash. We are requesting liquidating cash of $1,100,000.

STAGE 3 REQUEST—1952

In stage 3, for liquidating cash again, $350,000.

EQUIPMENT AND SUPPLIES

In the item of remainder needed for apparatus, equipment, and supplies, we are requesting the remainder referred to last year for equipment of $4,200,000, a cash request for the initial inventory of supplies and laboratory apparatus and housing furnishings of $2,540,000.

That, sir, is a brief summary of the present status of this project.

(The following information was submitted for the record:)

The expansion of research facilities for the National Institutes of Health analysis of cash, contract authority, obligation authority and cost limitations (by fiscal year and construction stage)

Plans and site (all stages):	
1948 cash appropriation	$3,500,000
Estimated cash or reserves required through 1952	3,500,000
Stage I construction ($40,000,000 cost limitation):	
1949 cash appropriation	5,000,000
1949 contract authority	25,630,000
1950 contract authority	8,200,000
1952 cash request	400,000
Total available for obligation	39,230,000
Previous cash available and 1952 request	36,000,000
Expenditures according to present construction schedule	36,000,000
Stage II construction ($8,600,000 cost limitation):	
1950 cash appropriation	3,900,000
1950 contract authority	4,700,000
Total available for obligation	8,600,000
Previous cash available and 1952 request	8,600,000
Expenditures according to present construction schedule	8,600,000
Stage III construction ($1,375,000 cost limitation):	
1951 cash	1,025,000
1951 contract authority	350,000
1952 cash (liquidating cash for 1951 contract authority)	350,000
Total available for obligation	1,375,000
Previous cash available and 1952 request	1,375,000
Expenditures according to present construction schedule	1,375,000
Equipment and supplies:	
1951 cash (partial equipment requirements)	3,000,000
1952 cash (remainder needed for equipment)	4,200,000
1952 cash request (initial inventory of supplies and laboratory apparatus, housing furnishings)	2,540,000
Total requirements	9,740,000
Previous cash and 1952 request	9,740,000

EXPECTED COMPLETION DATE

Mr. FOGARTY. This project will be complete in 1952?

Dr. MASUR. The construction of the main building, sir, indicates that we ought to be finished by the middle, or at the latest, the latter part of '52. There were some delays in putting the power plant on the market. It has now been awarded at a very favorable contract and it is estimated that that will be completed about November '52.

Mr. HEDRICK. How much is that contract?

Dr. MASUR. For the power plant, sir?

Mr. HEDRICK. Yes.

Dr. MASUR. I believe, sir, it was $5,200,000, approximately, within the range of our estimate, sir, as to what it would come to. We ought to be able to admit patients very early in 1953. We do not propose to start off in an institution of that size with 500 patients. We would like to start with a limited number of patients, and the limitation of starting off in a large plant, we feel, would be around

200, because if we would get below 200 as a starter, our per capita would be pretty high under such conditions.

TYPE OF RESEARCH FACILITY

Mr. FOGARTY. Will there be anything else like it in the world?

Dr. MASUR. I beg your pardon, sir?

Mr. FOGARTY. Will there be anything else like it in the world?

Dr. MASUR. In many ways, this is a unique medical research center. There is not, to the best of our knowledge, any research facility which has available to the clinical area roughly twice as much investigational space. There was some years ago some talk of a similar place in another country, which is now the subject of some discussion. They did not proceed with the plan. This, we believe, is a unique facility for carrying out medical research.

Mr. FOGARTY. As far as you know, there isn't another one like it?

Dr. MASUR. No, sir. As part of the planning of this building we have visited a considerable number of university hospitals and, as I mentioned the other day, university laboratories and industrial laboratories in an attempt to bring to this building the most modern thinking for research facilities.

APPROPRIATION REQUEST FOR 1952

Mr. SCHWABE. As I understand it, then, Doctor, you are really asking for an appropriation of how much money at this time for fiscal 1952?

Dr. MASUR. The total, sir, is $18,590,000, which is made up largely of liquidating cash to carry out previous contractual obligations.

Mr. SCHWABE. Of how much?

Dr. MASUR. $11,450,000 out of the $18,590,000. The obligational cash additional requested, some of which we will not need to spend in the coming year, but for which we must make obligations in our carrying this project forward——

Mr. SCHWABE. Including the power plant?

Dr. MASUR. The power plant, sir, has already been taken care of. The obligational cash is $7,140,000.

Mr. FOGARTY. Doctor, the total authorization for the first stage is $40,000,000, isn't it?

Dr. MASUR. For the main building, sir. In a previous hearing, we were asked to guess, because that was what it would have had to be a few years ago, as to what the entire package would represent, consisting of the main clinical center building, all auxiliary buildings, roads, lights, equipment, supplies, and our guess, sir, at that time was $60,000,000.

Mr. SCHWABE. Did that include the power?

Dr. MASUR. That included the whole package, sir, entirely wrapped up, and it appears as though we shall be very close to that figure.

Mr. FOGARTY. As of today, you will have used up $39,230,000 on stage 1.

Dr. MASUR. That is right.

Mr. FOGARTY. $770,000 is left.

Dr. MASUR. That is right.

Mr. FOGARTY. What is that to be used for?

Dr. MASUR. We have not requested the balance on the cost limitation. That is as far as we have gone. As a matter of fact, that additional $400,000 we are asking for now was not anticipated and we had hoped to keep the stage 1 cost limit at $38,830,000; I may be off on the last figure, but we have no plans to go beyond the $39,230,000 to take advantage of the full $40,000,000, nor have we exercised the authority given by this committee for an escalator clause in the original authorizations.

BUDGET RESERVES

Mr. FOGARTY. What was reserved under section 1214?

Dr. MASUR. There has been reserved, sir, $800,000 specifically authorized by this committee for an electrostatic generator.

Mr. FOGARTY. Where is that in the justifications?

Dr. MASUR. That occurred, I believe, 2 years ago.

Mr. HARLOW. It doesn't show it, Mr. Chairman. It was not this year.

Dr. MASUR. I mean the authorization originally occurred 2 years ago and a reservation was taken this year.

Mr. HARLOW. It is not section 1214 reserves, because the money wasn't appropriated in the big bill. It was appropriated a year previous; actually, the authorization was given in 1950.

Mr. SCHWABE. Until actually spent; was that the idea?

Mr. HARLOW. Yes, sir.

TYPE OF HEAT TO BE USED

Mr. HEDRICK. Do you propose to burn coal in this plant?

Dr. MASUR. We have been full circle on that, Dr. Hedrick, sir. When we first started, we planned on oil, and there, was several years ago a Presidential order against the use of oil. We went to coal. Our calculations indicated that we would need a coal storage facility of about one and a half or two times as large as the Yankee Stadium. We then went into the question of the acquisition of an off-site railroad unloading set-up to economize on cost of delivery of coal, which got into some very high figures, and about that time the restriction against oil was released, so that our present plans call for the use of oil with, incidentally, storage tanks which are a very interesting stand-by resource for other parts of Washington, with more than a million gallons of oil in reserve in case something happens. We have also made provision that if the large gas lines come through Washington to convert our boilers during the off-peak season when gas is cheaper, to economize in the use of gas as well, sir. So that eventually we shall be able to use either oil or gas, depending upon the market. I had not finished with the reserve reservation items.

BUDGET RESERVES

Mr. FOGARTY. What did you say the first one was?

Dr. MASUR. The first, sir, was the 12-million volt electrostatic generator, otherwise known as the Van der Graaf machine which will be used in our atomic radiation wing. It is commonly referred to as the "workhorse of the atomic energy laboratory," and is probably the single, most valuable utility in that kind of work.

Mr. FOGARTY. Why was that reserved?

Dr. MASUR. The first reason was that we have been waiting to place the order. They have not yet reached a 12,000,000-volt capacity. The Massachusetts Institute of Technology is building for the Navy and for itself such a 12-million volt machine. The Atomic Energy is building such a machine in at least one place, and before we placed our order, we wanted absolute proof that they could reach the 12,000,000 volts which they feel very confident they can. So the Bureau of the Budget, in consultation, felt that since we were going to wait longer anyhow and in view of the tightness of materials, it would be all right to hold that money in reserve until such time as we came back saying that we were ready to place an order.

The second reservation item was $1,000,000 on equipment, which is related to the phasing in the placement of our orders, and the third is the impounding of the money for the housing project.

RESERVE OF HOUSING FUNDS

The housing story is a long and very difficult one. We had authority for $1,125,000, which would have provided us with about 60 units, mostly of the efficiency type, essentially for the emergency personnel, operating-room staff, the house staff, the radiation technicians, the fire squad, the explosion squad, and that type of personnel. We felt, and still feel, that more housing will be required for a larger number of emergency people than the 60 or 70 in a project of this size. We shall have approximately 4,500 employees on this reservation, of whom a considerable number will be on different shifts for around-the-clock duty. As it stands now, the first request was granted; the second request for housing was not granted. The money granted in the first request is now impounded and we are awaiting specific authorization to proceed with that project from the Bureau of the Budget.

COST OF EQUIPMENT

Mr. HEDRICK. What is your total equipment going to cost?

Dr. MASUR. For equipment, apparatus, including the large apparatus, the total amount represents $7,200,000, for which we requested $3,000,000 last year and are this year asking for the previously declared remainder of $4,200,000. For items under $200, the initial inventory supplies and smaller laboratory apparatus, $2,540,000, representing a total requirement for equipment and supplies of $9,740,000, at pre-Korea price estimates.

FUNDS FOR HOUSING

Mr. FOGARTY. Doctor, from the language of the bill, you apparently had available $1,025,000, not $1,125,000.

Dr. MASUR. $100,000 of that housing money was held as contract authority last year.

Mr. FOGARTY. Also $350,000 toward completion of such a project not to exceed an estimated cost of $1,375,000; is that right?

Dr. MASUR. No; I am sorry sir. I have not made that clear.

Mr. FOGARTY. For construction of auxiliary, and so forth, roads, and so forth, $1,025,000, and in addition, contracts may be entered into in an amount not to exceed $350,000.

Dr. MASUR. May I explain that, sir? There are two construction items in there, the housing and the grounds maintenance building. The housing represented $1,125,000 in the estimates and the ground maintenance building repesented $250,000. Of that total last year, we were granted cash of $1,025,000 and contract authority of $100,000 for the housing and the contract authority of $250,000 for the grounds maintenance building. Adding in the $100,000 held back on the housing, plus the $250,000 on the ground maintenance building accounts for that $350,000.

Mr. FOGARTY. That was in the 1951 budget?

Dr. MASUR. That is right.

Mr. FOGARTY. It wasn't in 2 years ago. What is this new language, then, for payment of obligations incurred under authority heretofore granted for $350,000?

Dr. MASUR. $250,000 of that will be for the grounds maintenance building, and if we are permitted to award the contract on the housing for which plans are being drawn, we shall require the full $1,125,000 for the housing.

Mr. FOGARTY. And this $100,000 is for the drawing of plans for this?

Dr. MASUR. No, sir. In 1951, out of our request for $1,125,000 for housing, we were authorized $1,025,000 cash and in contract authority, $100,000.

Mr. FOGARTY. Oh, I see.

Dr. MASUR. I am sorry I hadn't made that clear, sir.

Mr. FOGARTY. It is not clear in the bill either.

Mr. BUSBEY. Doctor, I take it from your testimony that in your considered judgment, you thought it best not to wait until you could heat the clinical hospital with atomic energy?

Dr. MASUR. Or with solar radiation.

Mr. BUSBEY. That is all, Mr. Chairman.

Mr. FOGARTY. Thank you very much, Doctor.

Mr. HEDRICK. I am mighty sorry you aren't using coal to heat the center.

THURSDAY, MARCH 1, 1951.

CONSTRUCTION OF BUILDINGS, COMMUNICABLE DISEASE CENTER

WITNESSES

DR. J. W. MOUNTIN, ASSOCIATE CHIEF, BUREAU OF STATE SERVICES

CHRIS A. HANSEN, CHIEF, ENGINEERING SERVICES COMMUNICABLE DISEASE CENTER

Mr. FOGARTY. The committee has before it Dr. Mountin, and Mr. Hansen of the Communicable Disease Center. Judge McGrath, do you want to take over?

Mr. MCGRATH. Thank you.

Perhaps you could tell us something about this $500,000 which has been made available for designs and specifications for your communicable disease building in Atlanta. Will you do that, please?

Dr. MOUNTIN. Yes.

At the present time, most of the activities in the Communicable Disease Center which were described a few days ago to you in detail by Dr. Justin Andrews are being conducted in improvised buildings. For the most part, they are temporary buildings that are largely at the Lawson General Hospital, now a veterans hospital. They are quite unsuited for our purpose. The cost of maintenance is exceedingly high and a number of the activities having to do with the more virulent forms of bacteria organisms are difficult and dangerous to carry on. We have been in need of a building for some time, and the General Services Administration has seen fit to devote $500,000 of its funds for the design of a building. This is in the process now and I understand they are in the second stage of design.

Mr. MCGRATH. Mr. Hansen, maybe you know about how far they have developed with the plans. Could you tell us?

Mr. HANSEN. They are now in the tentative stage. The first is the preliminary stage, which is a very rough type of drawing covering the size and shape of the building. They are now in the second stage known as the tentative, in which they are laying out the rooms within the building, the size and location of the equipment, et cetera. They are about midway or three-quarters through the tentative. Following the tentative are the final construction drawings. They have not started on those.

Mr. MCGRATH. How much of that $500,000 has been used, approximately, if you will hazard a guess on it?

Mr. HANSEN. Well, sir, I do not know. That is the General Services Administration fund. I would suspect that they are roughly three- to four-tenths of the way through the total job.

Mr. MCGRATH. Why do you need that building there, Doctor?

Dr. MOUNTIN. The buildings that we are occupying at the present moment, as I have said previously, are temporary structures. They were built during the war. They are the cantonment type of hospital units built by the military. This hospital, Lawson General, was subsequently taken over by the Veterans' Administration, and as they acquired more permanent facilities for the care of veteran patients, they allowed us to use some of the units. These units, I think, were supposed to have had something like a 5-year life when they were constructed, but we have propped them up and kept them going now for something upward of 10 years all told.

They were not designed for laboratories in the beginning. They were designed for the care of war casualties. We have had to equip them for laboratory space. It is not possible to provide the necessary safety measures that are required to do the operations that we especially need to do at this time in connection with the preparation for bacterial warfare—biological warfare and other special weapons defense—which is quite an item now in our activities.

Mr. MCGRATH. Let me interrupt you at this point, if I may. If you would like to have any of this off the record, I wish you would tell us, and that brings up my next question. Why is it that you cannot get along with the present existing facilities that you have?

Dr. MOUNTIN. In many of these operations, you are dealing with what we speak of as virulent organisms. They are highly infectious.

You have to deal with them in quantities. You need to have protective measures around each of your operations. You need to sterilize the air. You need to sterilize equipment constantly. It is not feasible to do all of these operations in makeshift facilities. Many of the basic studies we just have to pass up. In fact, we have been having some laboratory infections although we have to be exceedingly cautious and doing only a limited part of the program that should be under way.

The next point is we are in there only from what I might say on a day-to-day basis. We have no permanent lease. We don't know when the Veterans' Administration or the Department of Defense might see fit to call those buildings back, and then we would be even without those buildings.

Mr. McGRATH. Mr. Hansen says we have spent about four-tenths of this, approximately, roughly. Now where did we acquire the land for this proposed building or was that a gift?

ACQUISITION OF THE LAND

Dr. MOUNTIN. The land for the proposed building was donated by Emory University without cost to the Government.

Mr. McGRATH. How big a tract was that?

Dr. MOUNTIN. Fifteen acres.

Mr. McGRATH. Will you tell us approximately how much that would be worth at the present market there, if you know, or maybe Mr. Hansen might know.

Dr. MOUNTIN. It is estimated about $50,000, is it not?

Mr. HANSEN. That is correct.

Dr. MOUNTIN. Roughly, $50,000. It is very well located with respect to Emory University, and we particularly sought that piece of land because of its very good location and the opportunity it affords us to take advantage of the other scientific resources that are represented in an institution such as Emory University.

SPECIAL ACTIVITIES

Mr. McGRATH. And outside of the normal work which that agency would have there, is there any work which you are doing now that you would like to tell us about that takes it out of the ordinary run of, say, so-called peacetime research work or communicable disease work that you are doing?

Dr. MOUNTIN. Yes, sir. In connection with protection against nonconventional methods of warfare, particularly the biological warfare, it is necessary to utilize organisms that might be utilized by the enemy for an attack and throw them under a variety of conditions, to see what their behavior is, to work on methods for detecting them in the air, water supplies, or other substances that might be contaminated.

In addition to that, we need to work on various protective devices that might be utilized to protect people, either mechanical devices or immunizing substances, sterilizing materials or any other thing that might give us a protective measure. You cannot do those things unless you are actually operating with the organisms that might be utilized or the type of organisms. It is impossible to know what

organisms might be used by the enemy, but they conform to a number of types, viruses, and so forth, and their behavior in groups, that is, group behavior is somewhat the same. We need to experiment with these types and thereby derive a great deal of information, but we are handicapped in that respect now with the present facilities.

Mr. McGrath. Let us suppose that one of our big commercial or industrial centers might be the object of a biological warfare attack. Where would your present facilities differ from what you have contemplated down in this new building? What we would like to know is this committee is, Are we prepared in that event, as far as you know, and could you tell us of what help, if any, this new building would be in determining the type of virus? If you develop that, we would just like to get the picture, because we have to know the need.

Dr. Mountin. I will do the best I can. First of all, in the study of these organisms, we need to grow them in quantities. The ordinary test-tube method of growth is insufficient. We have to grow them in vats and in large quantities, and then we need to grow them under different conditions, and subject them to one type of environment and another. Under those circumstances they take on different behavior patterns and different characteristics. All of that and more needs to be done. Then they need to be dispersed in air chambers to see how they behave in the atmosphere, how they survive and then how you can get them out of these large air chambers.

Now that sort of equipment isn't in laboratories that are presently established, because most of the bacteriological work now is done in relation to diseases that are acquired naturally mostly from person to person. There is a small amount of infection transferred directly from individual to individual, but when massive amounts are released in the air, the type of infection acquired is quite different and the problem of diagnosing is quite different. Examining for bacteria in the air is quite different from taking a swab from a person's nose or from a person's throat. It is just new kinds of equipment that is needed particularly when you want to release bacteria into the environment and then recover them. There are a lot of protective measures that need to be built into the establishment in order to protect the workers so that they don't come down with artificially induced infections, and the casualty rate could be terrific around these places. These protective measures aren't built into the establishment now largely because the whole subject of control of air-borne infections needs a great amount of study.

Mr. McGrath. Are air-conditioning units an easy method of dissemination of the microorganisms which is considered possible at the present time?

Dr. Mountin. That is considered possible, mostly for sabotage, however. You could infect limited areas and buildings and you could expose limited groups to the infection. However, for large-scale attack, probably some other method of dissemination would be used.

Mr. McGrath. I was referring particularly to nerve centers like factories or the Capitol or the Pentagon Building or buildings of that type.

Dr. Mountin. That would be the most likely method, I would think.

Mr. McGrath. Do you know if any tests have been made recently in this particular field?

Dr. MOUNTIN. I think—off the record.
(Discussion off the record.)
Mr. MCGRATH. Would you want to tell us anything else about it?

PROTECTION IN AN EMERGENCY

Dr. MOUNTIN. I think you were asking what we could do to protect. Well, my first answer is that that is one of the things we would like to find out. But, I don't want to give you the impression there are none. If an attack should occur, maybe the first intimation of it will be people coming down from either unknown types of disease or in excessive numbers. We have a reporting system in effect now, I think, that was described to you a few days ago. I said something about it and Dr. Andrews said some more. Following outbreaks of disease, we are prepared to make investigations, to isolate the organism and to examine it and then make determinations as to whether or not it is a natural infection or whether it is likely to be sabotage or overt attack. Work is being done on new immunizing methods, and better immunizing agents against different organisms. It is possible that a great deal could be done on sterilization of the air, particularly in buildings. We are working on methods of detecting various substances in water supply. We are working on methods of sterilizing water over and above the ordinary chlorine, because we know there are organisms that are not affected by chlorine. The whole field is wide open for all types of exploration.

METHODS OF EXAMINING THE AIR

Mr. MCGRATH. Are we making any tests of air at the present time
Dr. MOUNTIN. We are working on improved methods for examining air. The ordinary methods of examining air are not very satisfactory. It involves taking a sample of air, running it through a solution, getting a culture, then identifying the culture. It takes several days to do the job. whereas now we are working with physical methods for determining the character of particles in the air so that we can more or less get a running picture of what the character of the air is.
Mr. MCGRATH. What facilities have you at the present time to make these tests in the event of an emergency?
Mr. HANSEN. If I might mention, we now have six stations running preliminary studies on bacteria in air. The purpose of these studies is, first, to determine whether the existing equipment is adequate. We do not think it is. We are designing better equipment. This applies not only to buildings, but such things as bomb shelters, ways and means of keeping bacteria, if disseminated in the air, out of buildings and bomb shelters, and so forth. The facilities that we now have are as Dr. Mountin stated, inadequate to carry on many of those studies because the buildings are, well, Quonset huts and other types of buildings that are wholly inadequate and, therefore, much work needs to be done. It is restricted by the inadequate facilities. We are moving ahead as fast as we can with the facilities that we now have available.

PRESENT FACILITIES NOT ADEQUATE FOR PROTECTION

Mr. McGRATH. Dr. Mountin, do you think your present facilities are adequate in the event of an emergency to protect the American people, your present facilities?

Dr. MOUNTIN. They are not, neither our knowledge nor our facilities in the field of biological warfare. I don't know if you want that on the record or not.

Mr. McGRATH. Yes, I do.

Dr. MOUNTIN. That is a frank admission.

Mr. McGRATH. You are really working out of Quonset huts and shacks?

Dr. MOUNTIN. Yes. I might say that up to now, most of the studies on bacteria have been related to natural infection, the minute quantities that are passed from man to man or from the animal, which happens to be the reservoir. We are not geared to this massive type of infection that would occur in the event that artificial methods should be used to innoculate the population.

PROPER APPROACH FOR ADEQUATE PROTECTION

Mr. McGRATH. I think this will be almost my last question. What do you think would be the proper approach so that your group or your agency would be in a position to adequately meet this challenge if it should come in the nature of biological warfare?

Dr. MOUNTIN. I would say our first requirement is better knowledge.

Mr. McGRATH. And outside of that?

Dr. MOUNTIN. Our knowledge is woefully inadequate. We need to follow along the lines we are moving, to develop a better way, a prompt reporting of outbreaks of disease, a group equipped to run down these outbreaks and to determine their true nature.

Mr. McGRATH. Have you the facilities to do those very things that you talk about now?

Dr. MOUNTAIN. In a very inadequate way. We have limited facilities, limited resources.

Mr. HANSEN. If I may interrupt, the facilities we have are wholly inadequate for expansion into this field of bacteriological warfare research as it relates to the protection of the people. Our plan for assisting the State health departments in the detection of biological agents, we feel, is extremely important, and we are being called upon repeatedly for information and ways and means, and we are, as was mentioned a minute ago, developing equipment, but we should go further into the research, bacteriological research, which we cannot do with our existing laboratory facilities.

Mr. McGRATH. And you have the land given to us without cost and you have got the $500,000 appropriation for the plans of your new building.

Mr. HANSEN. Correct.

Mr. McGRATH. Do you think it is essential at this time in the development of your building?

Dr. MOUNTIN. We would think it essential; yes, sir.

TYPE AND COST OF BUILDING

Mr. McGRATH. Well, now, tell us about the cost of this building and what you plan, and make it as brief as you can, Doctor, the type of your building, what your cost is and what you contemplate.

Dr. MOUNTIN. The original estimate that we had was $9,500,000. That was exclusive of the land. However, Mr. Hansen has had some recent conversations with the public-building people, and I think it would be somewhat higher, perhaps. If the committee would want to go somewhat into the details of the construction and the cost, Mr. Hansen will be glad to do so since he has been working on that very intensively.

Mr. HANSEN. The original estimate was made last May. Since that time, the architects have had an opportunity to get into the detailed plans, they have found that with the increased cost of materials and equipment, and so forth, that their latest estimate is in the neighborhood of $12,000,000. The building itself is 130,000 square feet of laboratory and auxiliary space. If you are interested in seeing the plans, we have the lay-out here.

Mr. McGRATH. And what would you do in that type of building?

Mr. HANSEN. We would do bacteria research and training. If you will look at the plan, this will be apparent. We have one building which is for virus work. That is separated from the rest on account of the possibility of contamination, with research going on in other buildings. Then there is what we call the infectious disease building which is for very highly infectious diseases, with special precautionary measures to protect the workers and people in the neighborhood. Then the main laboratory building is for the less infectious type of laboratory research and diagnostic work.

Mr. McGRATH. Well, this committee doesn't want to spend one dollar that is not necessary, but we want to feel that if there is an attack on Chicago or any little town or hamlet or any big city, that we have done what we think is right to meet this challenge if it does come.

Now, is there anything else you would like to tell us about your work there, Doctor?

Dr. MOUNTIN. I think that it would be somewhat of a repetition of what I said, but let me emphasize the quarters we have are just totally unsuited to our needs.

DETECTION OF ORGANISM.

Mr. McGRATH. In any event, if there was a mass attack on New York or Chicago or some town, where would you come into the picture in this field of bacteriology?

Mr. HANSEN. We would come into the picture in the detection of the organism. We already have, as I mentioned, six stations in operation determining the background of bacteriological agents in the area. With that background, we will know when other bacteria come into the picture. We would set up stations around the area to determine that.

Mr. McGRATH. From the area, you would have material flow in to you for your tests?

Mr. HANSEN. Correct.

Mr. McGRATH. Then what would you do after that?

Mr. HANSEN. We would let the local area know what type of organism it was and how to combat it, how to protect themselves from it.

Mr. McGRATH. You would disseminate that to every part of the country, would you?

Mr. HANSEN. Yes, sir.

Mr. McGRATH. So that if the local men would have an attack there, they would be able to handle the problem?

Mr. HANSEN. That is right.

Mr. McGRATH. Then would you tell them what to use to counteract that?

Mr. HANSEN. Yes, we would.

Dr. MOUNTIN. I want to emphasize the need for knowledge.

Mr. McGRATH. Knowledge comes from research.

Dr. MOUNTIN. Knowledge comes from research. We need to develop a lot of protective devices against the artificial disemination of bacteria. Most of our knowledge today relates to the man-to-man infection, and we think that most of it is just totally unadapted to the mass type of infection.

Mr. McGRATH. That is all I have, Mr. Chairman.

Mr. FOGARTY. Have you any questions, Dr. Hedrick?

Mr. HEDRICK. Supposing the water supply of a city was contaminated. Would you handle that also?

Dr. MOUNTIN. Yes, sir.

Mr. HEDRICK. Either air or water?

Dr. MOUNTIN. Yes, sir; for any infection that is of interest to defense we have either research on the way or projected.

USE TO BE MADE OF NEW BUILDING

Mr. HEDRICK. What would you do with this new building that you are not already doing at Savannah?

Dr. MOUNTIN. In the Savannah laboratory they are working for the most part on insects, with mosquitoes and so forth, also working on toxicology. They are working on the toxic effect of the various insecticides. Most of the bacteriology of the communicable disease center is going on at the present moment in the improvised quarters at the Lawson General Hospital. Those particularly are the activities that would be transferred into the new building and items would be taken up for study and development that we now are not prepared for—that we can't do because of the limited physical facilities we have in those buildings at Lawson General Hospital.

I might mention that the virus research that we have under way now is conducted at Montgomery, Ala. Under the new plan, it would be transferred to Atlanta in the new virus building, and there again, the research being done in Montgomery is severely handicapped on account of its highly infectious nature and the facilities they have there.

Mr. HEDRICK. You believe, notwithstanding the high cost of material and scarcities of some materials, we should nevertheless go ahead and build this building?

Dr. MOUNTIN. Yes, sir.

Mr. HEDRICK. You think it is that urgent, do you?

Dr. MOUNTIN. Yes, sir.

Mr. MCGRATH. Dr. Mountin, I have recently discussed the need for this building with representatives of the communicable disease center. I wonder if you would have them furnish a statement for the record which will cover some of the points we discussed.

(The statement referred to is as follows:)

REASONS WHY THE PROPOSED COMMUNICABLE DISEASE CENTER BUILDING IS ESSENTIAL TO THE NATIONAL DEFENSE

The communicable disease center is the unit of the Public Health Service from which the States expect assistance in solving communicable disease control problems which are beyond their facilities, which involve adjoining States, or which are the result of some Federal enterprise. It is reasonable to expect that the present emergency will produce new health issues of a national scope and impose additional responsibilities upon State and local health departments. Localized health problems are already occurring as a result of military and industrial mobilization; biological warfare—either by sabotage or overt attack—would raise severe problems for State and local health agencies. At the same time, the professional manpower will be reduced by military needs. It follows that increased Federal developmental research to improve and expedite communicable disease prevention and control practices—especially those related to civilian defense—will be necessary, as will be expanded facilities for demonstrating the new procedures and for training State and local health personnel in their use. Situations will no doubt be created which exceed the facilities of the area affected. When this occurs, outside assistance in the form of epidemiology, laboratory diagnosis, and possibly decontamination will be required. Much of this burden will fall upon the communicable disease center. Therefore, its research, training resources, and epidemic and disaster aid services will have to be extended quantitatively and qualitatively to meet this situation.

The most important communicable disease hazard incident to modern warfare would derive from the use of biological weapons. Methods of detecting unusual numbers of airborne disease-producing agents in time to take proper protective measures against their effects will require not only more efficient types of air sampling equipment, but of methods for identifying and quantitating microorganisms in a small fraction of the time now required. If this can be done, a much greater measure of protection of the population can be accomplished. Work with the potential agents of biologic warfare must be carried on under the most exacting conditions for the protection of the laboratorians and the adjacent public. Special and numerous contrivances must be provided for the safe experimentation with infectious material, for the air-conditioning of individual rooms, the incineration of contaminated air and for the disposition of infected animals, their discharges, and other wastes. Research problems exist which cannot be undertaken with present facilities because of the hazard to laboratory personnel and the surrounding community. The necessary protective barriers can be built more effectively and economically into a new structure designed for these purposes than they can be installed in the present temporary and portable buildings now being used at Lawson Veterans Hospital and the Montgomery Virus Laboratory. Accidental airborne infections have already occurred among the personnel in these makeshift laboratory quarters. It is evident that even pilot plant experimentation to improve air sampling devices would be unduly dangerous, if infectious organisms are used. A recent review by civilian laboratory consultants states emphatically that "If an expanded program is adopted in relation to BW the present quarters (of the CDC Laboratory Services) might become a menace to the entire Lawson Hospital community." In addition to the moral obligations involved, laboratory-acquired infections are costly to the Government because of compensation and claims resulting therefrom. Adequate rental space is not available in Atlanta and, moreover, adaptation of such ordinary space would be excessively expensive and wasteful.

The manual on Health Services and Special Weapons of the United States Civil Defense Administration states in the section regarding biological warfare against humans:

"The form of overt biological warfare which would be most likely to be used against us in the event of war would be through the creation of aerosol clouds of critically sized particles containing aggregates of pathogenic agents over urban areas, other massed populations, or important military targets. These aerosols

might be produced by bombs dropped from aircraft or released from submarines approaching port cities, or possibly through guided missles.

"Biological warfare agents could conceivably be used by subversive methods in an almost infinite variety of fashions. A saboteur could introduce any of a wide selection of pathogenic agents into the water, food, and milk supplies or into the air of localized but strategically important communities, buildings, or other places where people congregate."

In addition to the research tasks confronting health agencies, new and highly specialized knowledge resulting from investigations and studies must be incorporated into training courses for ultimate application under conditions of attack. Training of epidemiologists and related professional workers is a logical and existing activity of the Public Health Service which must be sharply pointed toward the urgent new needs. Epidemic and disaster aid is furnished by the communicable disease center by dispatching teams of skilled specialists to trace sources of disease, conduct laboratory diagnoses, and to assist in controlling the problems. In war, as in peace, the services of the center, therefore, are on call to State and local health departments. This is a most important consideration in the biological warfare defense aspects of civil defense.

There is one final point to underscore and that is the importance of air as a means of spreading disease. The requirements for defense in many respects only accentuate the normal civilian problems that arise from air pollution. While there are vast gaps in knowledge concerning the survival of bacterial in the atmosphere and their dispersal, much could now be accomplished by improved methods for applying the knowledge we already possess. It is not, perhaps, too optimistic to expect that the air man actually breathes may be purified much as water, milk and other foods are, and because of which they no longer are the potent sources of disease they once were. These results can only be accomplished by research—basic and operational—and the widespread application of knowledge as it accumulates. Unfortunately, air hygiene has until recently been a neglected area of sanitary science, consequently we need to redouble our efforts to be prepared for the threatening emergency.

The proposed building has been designed to include every safety feature known for the protection of laboratory workers and the surrounding neighborhood. It will permit the most hazardous and complicated types of research on air-borne diseases—a top priority activity in peacetime as well as war—the development of safe handling techniques and the demonstration of these procedures and special equipment to key health personnel from all over the country. It willl bring together under one roof for the first time the epidemiologists making field investigations of disease, the laboratory diagnostic services on which they depend, the sanitation personnel who teach and assist in carrying out the indicated control methods, the audiovisual experts who develop the training aids which supplement and extend the efforts of health training specialists, and most of the other essential services of the communicable disease center. The construction of this sorely needed building will permit the center to render fullest assistance to State and local health departments in research, training, and direct field aid in connection with the national emergency.

Mr. FOGARTY. Thank you, Dr. Mountin.

PAY, ETC., COMMISSIONED OFFICERS

WITNESS

DR. EUGENE A. GILLIS, CHIEF, DIVISION OF COMMISSIONED OFFICERS

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
Appropriation or estimate	$1,600,000	$1,790,000	$1,900,000
Unobligated balance, estimated savings	−13,286		
Total direct obligations	1,586,714	1,790,000	1,900,000
REIMBURSABLE OBLIGATIONS			
Reimbursements for services performed	414,251	582,700	616,600
Total obligations	2,000,965	2,372,700	2,516,600

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
1. General duty	$762,802	$767,860	$770,000
2. Retired officers' pay and survivors' benefits	786,769	980,140	1,088,000
3. Tuition for training	37,143	42,000	42,000
Total direct obligations	1,586,714	1,790,000	1,900,000
REIMBURSABLE OBLIGATIONS			
4. Reimbursable details of commissioned officers to other agencies	414,251	582,700	616,600
Total obligations	2,000,965	2,372,700	2,516,600

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	160	163	165
Average number of all employees	135	149	152
Personal service obligations:			
Permanent positions	$1,173,119	$1,348,870	$1,384,910
Payment above basic rates	8,125	5,110	5,110
Total personal service obligations	1,181,244	1,353,980	1,390,020
Deduct charges for quarters and subsistence	4,191	3,420	3,420
Net personal service obligations	1,177,053	1,350,560	1,386,600
DIRECT OBLIGATIONS			
01 Personal services	762,802	767,860	770,000
11 Grants, subsidies, and contributions	37,143	42,000	42,000
12 Pensions, annuities, and insurance claims	786,769	980,140	1,088,000
Total direct obligations	1,586,714	1,790,000	1,900,000
REIMBURSABLE OBLIGATIONS			
01 Personal services	414,251	582,700	616,600
Total obligations	2,000,965	2,372,700	2,516,600

Mr. FOGARTY. Dr. Gillis, do you have a statement for the committee?

Dr. GILLIS. Yes, sir.

GENERAL STATEMENT

Dr. GILLIS. I would like to explain first a little bit about the Commissioned Corps.

The Commissioned Corps of the Public Health Service is one of the seven uniformed services, the others being the Army, Navy, Marine Corps, Air Force, Coast Guard, and Coast and Geodetic Survey, and as such is subject to the same general laws regarding pay, promotion, retirement, and so forth.

The Commissioned Corps is composed of Regular and Reserve officers, the Regular Corps being a career service while the Reserve Corps is utilized for training, for duty in time of national emergency and for determining fitness for appointment in the Regular Corps. The Commissioned Corps is composed of the following professional

categories: Medical, dental, engineer, pharmacist, scientist, such as biochemist, physicist, nurse, therapist, dietitian, sanitarian, such as milk and food specialist, and veterinarian.

As of January 31, 1951, there were 1,254 on duty in the Regular Corps, and in the Reserve there were 1,022 on active duty and 1,235 on inactive status.

The pay for both Regular and Reserve officers is included in the estimates of the various operating programs; however, transfers of amounts necessary to pay Regular Corps officers are made to this appropriation under consideration. Pay, etc., commissioned officers in the amount of $1,900,000 is only for 91 officers on general duty out of 1,500 authorized, for tutition for training and for officers on retired status.

GENERAL DUTY OFFICERS

The item "General duty" consists of those officers assigned to positions as follows:

1. Assignments to the immediate office of the Surgeon General.
2. Chief professional officers (Assistant Surgeons General positions for dental, engineering and nursing).
3. Assignments to the Division of Commissioned Officers.
4. Assignments to the basic regional staff of the service each region (medical director, deputy medical director, engineer and nurse).
5. Temporary or emergency assignments which merit special consideration.
6. Nonreimbursable details to other agencies where the purpose is to represent the Public Health Service in a comprehensive capacity.
7. Training assignments in highly specialized fields, such as radiobiology, which are of general interest to the Public Health Service and which are not financed by specific program appropriations.

TUITION FOR TRAINING

Section 218 of Public Law 425 authorizes the payment of tuition and incidental expenses to regular officers attending institutions outside the Service. It has been estimated that 60 officers will receive such training during the fiscal year 1952. Tuition for each officer is estimated at $600 and his incidental expenses for such items as books, laboratory equipment, and supplies will approximate $100 per annum.

INCREASE IN NUMBER OF RETIRED OFFICERS

The retired list is composed of officers who have been retired for age, disability, or after specified periods of service in accordance with provisions of law. This activity also provides death gratuity payments to survivors of officers who die in line of duty. The estimated increase is due to provision for retirement of 19 additional officers. In view of the retirement of 2 officers for age is mandatory and 37 officers have the legal right to retire for years of service, and since past experience indicates an average of 17 retirements per year for disability in accordance with the Career Compensation Act, the estimate is very conservative.

Mr. FOGARTY. Thank you, Doctor.

I will ask that this table on page 98 of the justification showing increase and decrease of retirements be put into the record at this point.

Table of increase and decrease of retirements

	Fiscal year 1947	Fiscal year 1948	Fiscal year 1949	Fiscal year 1950	Estimate fiscal year 1951	Estimate fiscal year 1952
Retired for—						
Disability	20	16	16	21	17	17
Age	5	5	2	4	10	2
Years of service			6	8	12	8
Failure to pass examination			1		1	
Total retirements	25	21	25	33	40	27
Dropped:						
Death	3	8	6	4	8	8
Other		1	3	1		
Total dropped	3	9	9	5	8	8
Net increase in officers on retired list, end of fiscal year	22	12	16	28	32	19

Mr. FOGARTY. And also this table on page 119 of the printed bill.

Summary schedule of regular commissioned officers on active duty financed from Public Health Service appropriations

	1950 actual		1951 estimate		1952 estimate	
	Average number	Net salary	Average number	Net salary	Average number	Net salary
"Control of venereal diseases, Public Health Service"	41	$298,593	40	$290,000	40	$306,623
"Control of tuberculosis, Public Health Service"	49	350,075	65	463,669	65	469,811
"Assistance to States, general, Public Health Service"	98	630,902	79	550,987	88	616,265
"Control of communicable diseases, Public Health Service"	70	460,285	85	553,966	98	632,308
"Salaries and expenses, water pollution control, Public Health Service"	31	207,388				
"Engineering, sanitation, and industrial hygiene, Public Health Service"			114	775,000	122	823,768
"Disease and sanitation investigations and control, Territory of Alaska, Public Health Service"	10	80,449	8	74,103	6	54,132
"Salaries and expenses, hospital construction services, Public Health Service"	11	89,782	14	126,800	16	144,852
"Hospitals and medical care, Public Health Service"	388	2,750,737	426	3,178,020	473	3,585,296
"Foreign quarantine service, Public Health Service"	25	236,716	25	237,000	25	239,400
"Employee health service programs, Public Health Service"	12	78,630	6	46,665		
"Operating expenses, National Institutes of Health, Public Health Service"	91	709,700	94	739,600	115	928,291
"Operating expenses, National Cancer Institute, Public Health Service"	46	344,776	49	351,800	49	354,500
"Mental health activities, Public Health Service"	72	531,494	46	360,800	46	365,900
"Operating expenses, National Heart Institute, Public Health Service"	30	208,139	32	252,726	34	271,660
"Dental health activities, Public Health Service"	20	173,275	28	229,073	29	242,133
"Construction of research facilities, Public Health Service"	3	20,507	4	31,100		
"Salaries and expenses, Public Health Service"	33	228,304	10	81,551	12	95,946
"Pay, etc., commissioned officers, Public Health Service"	135	1,177,053	149	1,350,560	152	1,386,600
"Office of international health relations, Public Health Service"	4	28,520				
"Service and supply fund, Public Health Service"			2	11,439	2	11,610
Total	1,169	8,005,325	1,276	9,704,859	1,372	10,529,095

Mr. FOGARTY. Doctor, your only sizable increase is for retired officers' pay and survivors' benefits of $107,000. Now your assignments to the Division of Commissioned Officers, how many are in that Division?

Dr. GILLIS. Thirteen.

Mr. FOGARTY. Do you have a list of them?

Dr. GILLIS. I have a list of them; yes, sir.

Mr. FOGARTY. Will you put that in the record?

Dr. GILLIS. Yes, sir.

(List referred to is as follows:)

LIST OF OFFICERS ATTACHED TO DIVISION OF COMMISSIONED OFFICERS

Beard, J. Howard	Senior surgeon.
Drescher, Erwin C	Senior surgeon.
Galt, Charles B	Dental director.
Gillis, Eugene A	Medical director.
Hammerstrom, Richard J	Senior sanitary engineer.
Knott, Leslie W	Senior surgeon.
McLaughlin, Margaret L	Senior nurse officer.
Newman, Sidney H	Senior scientist.
Simnacher, Ernest J	Senior pharmacist.
Stephenson, Boyd W	Pharmacist.
Wallace, Marie E	Nurse director.
Whitmore, Charles W	Senior assistant surgeon.
Williams, Charles L., Jr	Senior surgeon.

SALARIES AND EXPENSES, PUBLIC HEALTH SERVICE

WITNESSES

G. ST. JOHN PERROTT, CHIEF, DIVISION OF PUBLIC HEALTH METHODS

ROY L. HARLOW, CHIEF FINANCE OFFICER

MISS MARGARET G. ARNSTEIN, CHIEF, DIVISION OF NURSING RESOURCES

DR. L. L. WILLIAMS, JR., CHIEF, DIVISION OF INTERNATIONAL HEALTH

Funds available for obligation

	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
Appropriation or estimate	$4,400,000	$2,918,000	$2,868,000
Transferred from "Operating expenses, National Heart Institute, Public Health Service" pursuant to Public Law 583e	50,000		
Adjusted appropriation or estimate	4,450,000	2,918,000	2,868,000
Unobligated balance, estimated savings	−10,508		
Savings under sec. 1214		−50,000	
Obligations incurred	4,439,492	2,868,000	2,868,000
Comparative transfer from—			
"Office of international health relations, Public Health Service"	134,969		
"Salaries and expenses, hospital construction services, Public Health Service"	24,525		
Comparative transfer to—			
"Engineering, sanitation, and industrial hygiene, Public Health Service"	−662,200		
"Dental health activities, Public Health Service"	−53,156		
"Assistance to States, general, Public Health Service"	−1,050,700		
Total direct obligations	2,832,930	2,868,000	2,868,000

Funds available for obligation—Continued

	1950 actual	1951 estimate	1952 estimate
REIMBURSABLE OBLIGATIONS			
Reimbursements for services performed	$1,800	$37,820	$25,628
Comparative transfer from "Office of international health relations, Public Health Service"	15,210		
Comparative transfer to "Engineering, sanitation, and industrial hygiene, Public Health Service"	−1,800		
Total reimbursable obligations	15,210	37,820	25,628
Total obligations	2,848,140	2,905,820	2,893,628

Obligations by activities

Description	1950 actual	1951 estimate	1952 estimate
DIRECT OBLIGATIONS			
1. Evaluation of public health problems and methods	$464,294	$463,600	$463,600
2. Development and coordination of nursing resources	94,706	93,000	93,000
3. International health activities	134,969	140,500	140,500
4. Management and central services	2,138,961	2,170,900	2,170,900
Total direct obligations	2,832,930	2,868,000	2,868,000
REIMBURSABLE OBLIGATIONS			
1. Evaluation of public health problems and methods		13,725	
3. International health activities	15,210	24,095	25,628
Total reimbursable obligations	15,210	37,820	25,628
Total obligations	2,848,140	2,905,820	2,893,628

Obligations by objects

Object classification	1950 actual	1951 estimate	1952 estimate
SUMMARY OF PERSONAL SERVICES			
Total number of permanent positions	658	665	632
Full-time equivalent of all other positions	7	3	1
Average number of all employees	618	608	592
Personal service obligations:			
Permanent positions	$2,349,648	$2,439,960	$2,444,287
Part-time and temporary positions	25,065	15,785	8,470
Regular pay in excess of 52-week base	8,555		9,677
Payment above basic rates	11,159	4,307	5,840
Total personal service obligations	2,394,427	2,460,052	2,468,274
DIRECT OBLIGATIONS			
01 Personal services	2,379,217	2,428,732	2,442,646
02 Travel	116,624	88,565	88,290
03 Transportation of things	2,190	1,950	2,150
04 Communication services	87,260	93,450	98,450
05 Rents and utility services	17,341	19,300	12,915
06 Printing and reproduction	124,337	124,500	123,186
07 Other contractual services	30,307	37,200	36,000
Services performed by other agencies	5,204	12,030	2,500
08 Supplies and materials	23,277	24,200	23,700
09 Equipment	47,173	37,811	37,636
15 Taxes and assessments		262	527
Total direct obligations	2,832,930	2,868,000	2,868,000
REIMBURSABLE OBLIGATIONS			
01 Personal services	15,210	31,320	25,628
02 Travel		6,500	
Total reimbursable obligations	15,210	37,820	25,628
Total obligations	2,848,140	2,905,820	2,893,628

Mr. FOGARTY. We have now for consideration salaries and expenses of the Public Health Service. Mr. Harlow, do you have a statement you would like to make?

Mr. HARLOW. Yes, sir; I would like to, if I may, Mr. Chairman.

This is the last appropriation item in the bill which affects the Public Health Service, and it therefore represents those activities of the Public Health Service which are not covered by other specific appropriations as the language indicates.

There are four main items which are covered here. The first is evaluation of public-health problems and methods, which is handled by Mr. Perrott. The second is the development and coordination of nursing resources; the third, international health activities. The fourth is the management and central services item of the Public Health Service which is a part of the office of the Deputy Surgeon General.

Mr. Perrott, if you would like, Mr. Chairman, can give you a word picture of his activities.

FUNDS AVAILABLE, 1951 AND 1952

Mr. FOGARTY. Mr. Harlow, you had available in 1951, $2,918,000, and that was reduced $50,000 under section 1214. Where was that $50,000 applied?

SECTION 1214 CUT

Mr. HARLOW. That $50,000 was applied, Mr. Chairman, to increases which appeared in the 1951 appropriation for international health activities and development and coordination of nursing resources as well as to the two other projects.

NOTE.—The reserve was applied as follows:

Public health methods	$5,500
Nursing	2,000
International health	2,000
Management services	40,500
Total	50,000

DECREASE IN POSITIONS

Mr. FOGARTY. Now you had available, then, for comparable purposes, $2,867,115, and you are asking this year $2,868,000, or an increase of $885, and you show a decrease of 33 positions. Where are those positions?

Mr. HARLOW. Those 33 positions, Mr. Chairman, appear in the last item in the appropriation, "Management and central services." The savings, however, is offset by legislative increases in pay, such as within-grade salary increases, pay in excess of 52-week base and the social-security tax, which we are required to pay on the salaries of people who are not now subject to the civil-service retirement system.

DIVISION OF PUBLIC HEALTH METHODS

Mr. FOGARTY. All right, Mr. Perrott, do you want to tell us what you are doing with this $462,000? What is the reason for the increase of $885?

Mr. PERROTT. It is a net figure which partially meets the cost of within-grade salary advancements.

Mr. FOGARTY. No increase in positions?

Mr. PERROTT. No increase in positions.

Mr. FOGARTY. All right, continue.

Mr. PERROTT. The Division of Public Health Methods has a number of functions. It acts as a staff division for the Surgeon General, providing him with information on a number of health matters. It includes what we call our Public Inquiries Branch, which answers letters from the general public and others, letters asking information about public health matters. The Division publishes Public Health Reports, the weekly magazine of the Public Health Service, in which research articles are published and reports of communicable diseases which we get from the States and are required to be published by law.

In addition to that, the Division maintains a flexible group of experts in several fields in public health which have been useful to the Public Health Service in the development of new programs in the public health field. For some years the Division has been carrying on studies in connection with health and manpower requirements, the numbers of various professional persons in the United States, and these sources of data have been used by the National Security Resources Board's Health Advisory Committee in the last few months. We have assisted the Advisory Committee in connection with their estimate of manpower requirements. We have assisted the Advisory Committee in designing their surveys of hospitals and medical schools and schools of public health and dental schools to which they have been going, to determine the manpower needs of these various schools and hospitals. So that the studies of the Division in the past in this manpower field have been particularly useful to the Advisory Committee—the Rusk committee of the National Security Resources Board.

We are also doing a study in the Pittsburgh area in behalf of the Security Resources Board and in cooperation with the University of Pittsburgh, to obtain information essential to general mobilization planning as it concerns the allocation of services provided by physicians and hospitals. We have been using Pittsburgh as sort of a guinea pig, if you like, an industrial community, with the idea that the methods developed there can be useful in other areas in connection with mobilization planning and the estimates of minimum needs of physicians and other health personnel in that area. That is being done in about 29 counties around Pittsburgh.

Then we have recently provided a staff to an advisory committee to the Surgeon General which, with the cooperation of the Association of American Medical Colleges and the American Medical Association, has made an extensive report on the financial status of medical schools and the impact of our grant programs on these schools. This study has just been published.

Another activity of the Division has been a study of the cost of hospitalized illness in the District here which we did in cooperation with the District Medical Society. We have had inquiries from other medical societies concerning the possibility of similar studies in other areas. It is that type of study in the health manpower field that the Division has done a good deal of work on in past years and we hope will be continued.

We are just starting on the study of the schools of public health, for example. Public health personnel are in pretty short supply, and we are making a study now of the finances, staffing, and other aspects of the schools of public health. Then in the Division also is a branch which makes studies of morbidity. Our Division does not collect the routine statistics on morbidity that are reported by the States, but it has over the years made special sample studies on illness in the population, and those have been pretty basic data which have been used in planning for health programs.

HAGERSTOWN STUDY

I neglected to mention Hagerstown in connection with morbidity studies. Hagerstown since about 1918 has been a community where the Public Health Service has worked. Well, it has been somewhat similar to a laboratory except that it has been a community laboratory, people living in their own homes in Hagerstown. They have information beginning with 1918 on the health status of the people in that little town. Many of them now, of course, have grown up and have families of their own. So that we have had a great body of records on that population over a period of years since 1918.

During the last war, for example, we were able to compare the health records of young men who came up for physical examination under selective service with prior physical examinations, the health records of those same young men when they were children, and could see what relation there was between the defects which they had as children, when they grew up and then came for the physical induction or the physical examination.

Mr. FOGARTY. What did you find out?

Mr. PERROTT. Well, we found out that there were several defects which were found as causes of rejection that they had as children. For example, tooth defects. We found that children who were prone to dental caries, dental decay in their youth, when they came up for physical examination still had a very high prevalence of dental caries. We found that eye defects went through. We found children who had a tendency to be underweight—some of those were rejected because of underweight when they came up for induction. We found that some heart conditions, as I remember again, were causes for rejection. The data at least indicated that it was possible to have found in childhood the defects which may be causes of difficulty later, and some of those defects were present and were causes for rejection.

Mr. FOGARTY. Have you issued a report on that?

Mr. PERROTT. A report has been written and we will be glad to give you a copy, sir, if you care to.

Mr. FOGARTY. I think it might be well to get a copy, if we could.

Mr. PERROTT. I will be glad to.

Mr. SCHWABE. In reference to Hagerstown, Doctor, you had that population under observation for years?

Mr. PERROTT. Yes, sir.

Mr. SCHWABE. And you didn't tell us the figures with reference to physical rejections under the Selective Service Act—drafting the boys for military service—were greater or less as compared with other communities.

Mr. PERROTT. The figures were rather typical of other communities.

Mr. SCHWABE. Then your observation only included observation. You didn't attempt to do anything in the field of preventive medicine, may I say, or health promotion there that you might have done while you were making the observation; did you?

Mr. PERROTT. This study in Hagerstown has avoided bringing in and trying to develop medical services. That might sound strange at first, but it has been used as a place where we could get a normal community, where nothing more than the normal growth of medical or health services were available, so that we could get data on a normal community. We felt that if attempts were made to change medical services in the community, change it from the normal community that it was, then our results wouldn't really be representative of our American communities. That was really our reason.

Mr. SCHWABE. Considerable money was spent over the years in that study and observation, was it?

Mr. PERROTT. The amount is something like $25,000, I think, in Hagerstown annually.

Mr. FOGARTY. Do you have anything further to add?

Mr. PERROTT. No.

Mr. FOGARTY. Thank you very much.

DIVISION OF NURSING RESOURCES

Miss ARNSTEIN. Mr. Chairman and members of the committee, I think you are all aware of the importance of nursing in our whole medical program, that it is an essential part of medical care. Without it, the modern developments cannot be brought to the patient, medical skills and medical knowledge are not effectuated, and the nurse is a very important person to bring that care to the patient.

We have in the United States, interestingly enough, more nurses than we ever had before in our history, and we actually have more nurses per population unit than we have previously had, so that even with the growth of the population, the nurses have outstripped it. In spite of that fact, there is a general shortage of nurses throughout the whole country. This shortage exists in public-health agencies, in hospitals, and in all fields of nursing. It is becoming more acute. It has already become more acute as the military demands have increased, and even now when the military demands are just beginning to make inroads upon the nursing profession, we have some hospitals in the country that have no nursing service from 7 in the evening until 7 in the morning. That means that in those hospitals, those patients do not get their medications; they do not get their treatments.

Mr. DENTON. Don't they have anybody in the hospital?

Miss ARNSTEIN. They have some maid service and some auxiliary aids but not people who are allowed to give medications and many of the treatments ordered.

Mr. DENTON. Practical nurses?

Miss ARNSTEIN. They are not trained practical nurses. They are not allowed to give hypodermics, for instance. They have to call for the night supervisor to give a hypodermic in those wards. Now there aren't many of those hospitals. We are fearful unless we take steps to prevent this situation spreading, that with the increased demands of the military services, that there will be more hospitals in that condition.

We are using practical nurses very generally. Our own estimates are that probably we can use two practical nurses for every professional nurse on the wards. So that we are making the best and greatest use of them that we can in the country.

Now we need to recruit more nurses, and that is going forward, but we also need to train them better so that they can do their job more efficiently, and we need to use them better, so that patients will receive the most benefit of their highest skills.

This Division is concerned with these three main aspects of the problem. Recruitment alone will not answer the problem. There are not enough women among the young high-school graduates to meet the full demand. So that we have to work very intensively on the effort to use nurses better and to train them better.

NEW NURSE-TEACHER TRAINING

This Division in the past year has been working with the National Security Resources Board, too, on planning to meet our nurse-power requirement. In cooperation with the National Security Resources Board and the Atomic Energy Commission, we planned training courses in the nursing aspects of atomic warfare. These courses were planned to train nurse-teachers in six centers in the United States. The first one was conducted by the AEC and the next five by Public Health Service personnel. They have trained 314 nurse-teachers, and thought the first training course was given the end of November and the last session has just been completed, we already have word that in one State the nurse-teachers have gone home and have taught 2,400 local nurses. In two others, they have taught a thousand local nurses, and in four other States they have sent us word, that numerous courses are planned. Other States haven't had the nurse-teachers home long enough to get word to us as to what they are doing.

This is extremely important, because the nurses need to know how to handle this whole phase of atomic warfare. They are the ones who would be on the nurse firing line, in the hospital taking care of the patients, in the field with the public-health agencies, entering the homes. Our nurse-teachers are taking their responsibility seriously and going home and passing on the instruction they received. We will continue to work with NSRB and civil defense in such training projects.

STUDIES OF NURSING RESOURCES BY THE STATES

The States have felt a need to analyze very carefully what the nursing resources are within the State, where their nurses are, how well trained they are to do their specific jobs, where they are working, and where they are needed most. The States have wished consultation and guidance in making these studies. They have felt that we, as an objective outsider because we have knowledge of the whole country and have had some experience in making many of these types of surveys, have been of assistance to them. We have given consultation service this past year to States who have requested it.

Results from these surveys take time because community action always takes time, but we have had word this year from States which we assisted in the last 3 years, of accomplishment that they have just

now managed to achieve. One State has written us and I quote: "Finally we can tell you that we have established a course in psychiatric nursing for all our students in the State"—that is an example of the kind of progress which is being made—sometimes quickly, sometimes rather slowly. We need very much to have more nurses prepared in two particular fields of nursing, one is psychiatric nursing and one is tuberculosis nursing, and I brought along a chart we had prepared which is a summary of the situation in four States.

TUBERCULOSIS AND MENTAL NURSING

Here is what four sample States that had comparable figures had in these fields of tuberculosis nursing and mental nursing. The column shows the number of nurses employed is 790; the column shows the number of nurses needed to meet minimum standards is 2,350. Both professional and practical nurses are included in these figures. There is a great unmet need. It is our most acute shortage. We will never fill that need until we train our students how to take care of such patients and interest them in it so that they feel at home in that field. One of the things that we are assisting States in doing is to develop the field practice in tuberculosis and mental hospitals for their students. In one State before the survey, 13 percent of their students had practice in these fields. After the survey, 52 percent of them had it. The aim, of course, is to get 100 percent, but it takes a little time to achieve the 100 percent.

We have evidence that patients are rehabilitated more quickly if they have adequate nursing care. This is another reason why we are trying to get improved nursing into the hospitals where patients with long-term diseases are treated. In tuberculosis and mental diseases rehabilitation is so important.

EDUCATION OF NURSES

We have worked in another phase of the program which is the education of nurses. We have in this country too many little schools of nursing which, because they are small, cannot have sufficient funds to support a real training program. One nurse-instructor sometimes teaches as many as 13 courses. I heard of that just the other day. Quite frequently they have to teach 5, 6, 7 courses in different fields. They have books that are outdated to the point that they are no longer useful, because medical science advances so much that a book that was written 15 years ago is not useful. Their libraries aren't adequate. Their laboratory facilities aren't adequate, and they don't have a sufficient number of patients to care for in order to become good nurses.

Now there is a solution to it. Some small schools have consolidated into one larger school. In the larger school, they have found that recruitment improves. In one school it went up 150 percent in the larger, consolidated school that had absorbed or consolidated with the smaller schools. We know that the small rural hospital needs nurses. It needs staff nurses and it needs the student's service. In these plans the large school continues to send back its students for part of their experience to the small hospital. This gives the small hospital continuous student service and stimulation from the students.

At the same time, it interests the student in working in a rural area, and we have evidence from places that have tried it that those rural hospitals which have students in them get more staff nurses for employment after they have graduated. They have no trouble in recruitment. The student has worked there. She feels at home. She likes that community and she will go back to work there. So that consolidation of schools is one of our great hopes in the conservation of our teaching instructors in schools of nursing, and of giving our students a better education and still keeping them interested in working in our rural areas.

Again, at the risk of overdoing the defense angle, when our supply of teachers is being depleted as it has been, by the needs of the military this consolidation is doubly important. In the consolidated school, you can use fewer instructors than in the total in the separate small schools.

BETTER UTILIZATION OF NURSES IN HOSPITALS

I don't want to take too much of your time. I will only mention one other point, the other main phase of our program, which is assistance in better utilization of nurses in hospitals. We have found in some of our head-nurse studies that you get a picture like this [indicating], where the head nurse, who is supposed to be supervisor of patient care and not doing housekeeping and clerical duties, finds herself with 26 percent of her time taken up in clerical duties, with 17 percent of her time taken up in such staff duties as making an empty bed, which a practical nurse could do, and with another 8 percent in doing errands and housekeeping. Not all of this time could be saved. Nobody could spend 100 percent of the time on the thing she should be doing. But at least a substantial portion of this could be saved with clerical help, which is less expensive and less scarce. Time saved would be devoted to what she should be doing, looking after the patients and teaching her students and her staff nurses.

Nursing has become a lot more complicated, which is another reason for this necessity of studying our use of nurses. This chart depicts, I think, one of the most startling things of all. This is what happened 10 years ago in the number of treatments that were given on wards. There is a 131 percent increase in the number of injections that are being given for the same sized patient load, a 278 increase in the number of blood transfusions, and I think any of you who have been in hospitals or have had members of your family in hospitals know that 10 or 15 years ago, a patient was practically dying if he had a blood transfusion. Now it is quite routine. He comes down from the operating room and he has a blood transfusion. Other intravenous fluids have increased 543 percent. All of this makes much more nursing care necessary and a much more complicated job.

I have only picked out a few examples of the increase in needed services. There is a whole list of things the nurse must do which have increased in number. We are working in all of these cases in the country with nursing groups, hospitals, and schools of nursing.

Our current budget request does not call for any increase, Mr. Chairman. We are asking for the same amount which will enable us to continue these nurse utilization studies I have just mentioned, and in doing the studies, we are preparing manuals so that hospitals can make their own studies in the future. We do not intend to continue making

studies of this sort except as a way to develop improved methods of study. We will, however, continue to give assistance to State nursing groups on studies of their nursing resources which will pinpoint their needs and where their resources are and where they can improve their educational system and their nurse utilization. We will continue the function of our division in the collection and interpretation and the exchange of information on nursing and its problems for the country.

DIFFICULTY IN STAFFING NEW HOSPITALS

Mr. DENTON. I just wanted to ask one question. Does the Government have any program where they have grants or matched funds or anything like that to assist in training nurses?

Miss ARNSTEIN. Not now. As you know, we have had the Cadet Nurse Corps during the war and there are some bills up before the Congress at the present time which would give aid to nursing education. The only bill that has had any action is S. 337, which has been reported out of committee.

Mr. DENTON. I should think you would have a great deal of difficulty in getting all the nurses for all these new hospitals that are being built.

Miss ARNSTEIN. Well, there is difficulty in getting nurses for every sort of nursing, and it is one of the reasons why we are trying to foresee the needs. When we make the survey of needs, we include the needs of the hospitals that are under construction.

Mr. DENTON. I remember during the depression, though, nurses couldn't get an appointment and no end of them were out of work and couldn't get cases.

Miss ARNSTEIN. That is true and we thought that after World War II that situation might be repeated. Instead we have an increasing shortage of both professional and practical nurses. Even 120,000 so-called practical nurses, most of whom have not had real training, now working in hospitals do not solve the problem.

CADET TRAINING PROGRAM

Mr. SCHWABE. Well, in your cadet training program that was conducted during the war, there was a lot of dissatisfaction in that, wasn't there?

Miss ARNSTEIN. There was some dissatisfaction, I understand. I wasn't here at the time.

Mr. SCHWABE. But you know about it, though.

Miss ARNSTEIN. I think it was very minor, Mr. Schwabe.

Mr. SCHWABE. Do you remember how the great contest and debate arose as to what we could do with these nurses? They would get their training at the expense of the Government, get married and quit the profession, and then the question was whether they could be impressed back into the service, and all that sort of thing.

Miss ARNSTEIN. I was overseas at the time, but I have heard about it, of course, and read the records and history.

Mr. SCHWABE. As a matter of fact, the increase in the building of hospitals under the programs that have been in existence since the war was over has resulted in a greater demand for nurses in the hospitals, but there have been a lot more patients than they could

take care of, the same number of nurses, than they could before they had this hospital program inaugurated and in operation. Isn't that true?

Miss ARNSTEIN. Yes.

Mr. SCHWABE. So a lot of your nurses have gotten married and have changed their line of work, and that is accountable for a lot of your shortage, isn't it?

Miss ARNSTEIN. Well, as in any woman's occupation, we have a large group of inactive nurses. The group—we are making some studies on it—is a constantly shifting group. They come back into nursing. A high percentage of inactive nurses are married and have young children. A great many come back to nursing when their children are older.

Mr. SCHWABE. Some of them do, sure.

Miss ARNSTEIN. So that even though at one time the group is large, it isn't a static group.

Mr. SCHWABE. I have no further questions.

Mr. FOGARTY. Thank you very much, Miss Arnstein.

INTERNATIONAL HEALTH OFFICE

Mr. FOGARTY. Will you tell us about your international health activities, Doctor? You have 27 positions under you.

Dr. WILLIAMS. Two of those are reimbursable and are not shown in salaries here. It is really 25 positions.

Mr. Chairman and members of the committee, I have a great feeling of urgency in the field of international health activities because there is a responsibility on the Public Health Service now both to plan desirable international health programs and to aid the State Department in bringing the United States influence to bear on such organizations as the World Health Organization and the Pan-American Sanitary Bureau and develop plans on point 4 and ECA. Staff work for this responsibility rests on the Division of International Health.

As you know, there is quite a program of aid to other countries, under-developed countries and otherwise, that is now going on. Certainly in the health field this aid is not a dole. It is an investment. This appropriation is a small appropriation to a small division doing a very important piece of work. It is designed to supply what I look upon as the minimal hard core permanent staff, the nucleus, who make it possible for this Government to take advantage of the opportunities offered by the rapidly developing field of overseas health programs. The most immediate interest right now and, I think, the one of most critical importance, is the international health programs which have become instruments of immediate and primary importance in fighting Communist aggression, particularly in southeast Asia.

PROGRAMS IN SOUTHEAST ASIA

I would like to offer as an instance, a thumbnail of the impact programs in Southeast Asia as they are under way now. Communists make promises to the people; we've got to counteract these by providing beneficial programs among the people. The ECA is undertaking in the countries of Southeast Asia to carry on programs that

bring visible aid to the people themselves. It has become apparent that other types of programs are too slow in getting underway and that public health offers some programs that are most useful for this purpose. For instance, the residual spray of DDT against malaria can be done quickly and with only a few experts augmented by a great number of nationals of the cooperating countries. The comfort from it is immediate. The reduction of malaria is manifest sometimes as quickly as 2 months. It is a quick program that can be put into effect in hundreds of thousands of peoples' homes. That program is often preceded by using the newer antimalaria drugs both for treatment and for prophylaxis. It is so nontoxic as to be so safe that everybody can take it. It can produce no harm. It can bring protection from malaria to a large number of people while they are waiting arrival of the DDT program, and the results are manifest in a few weeks. One of the antibiotics (ophthalmic ointment) is very effective against trachoma.

In some of these countries we find two out of three persons have trachoma, which commences as an acute infection of the eyes, becoming chronic, and it leads to blindness. The ophthalmic ointment benefits are manifest in a few days. These programs thus lend themselves most effectively as impact programs and are now being successfully prosecuted in such countries as Indochina, Burma, Thailand and Indonesia. Penicillin against the venereal diseases and yaws is another one that is well adopted for use as an "impact" program. The most urgent need right now for overseas public health activities is their use as impact programs to prove to the villager that friends are acting in their behalf.

Of second importance is the economic program in under-developed areas. Economic development depends on manpower and manpower depends on the health of the laborer. So the need for public health programs in the point 4 program is self-evident. In the worst of the under-developed countries, one sees an exaggerated situation. There ill-health is massive, and where ill-health is massive, it appears to be a barrier to all programs aimed at economic development. Those people don't change their manner of living without some aid.

Just as an illustration, there are some areas where malaria affects 80 percent of the people, and in the same areas hookworm may be 90 percent. Trachoma in some area infects two out of every three, and yaws or a venereal disease two out of every five, particulary in the cities. As for dysentery, almost everybody has at least one attack a year and many have a number of attacks. As a result it is often found that among a large population the average haemoglobin content of the community, not of the individual, but of the community, is probably something below 65 percent of normal.

EFFECT OF MASSIVE ILL HEALTH

I have seen the effect of massive ill health on people, particularly in India, Burma, and China and have noted the fact that in the areas of higher disease prevalence the average individual spends almost all of his or her time from sunup to sundown making a bare existence. It is only in the restricted lush areas of the tropics where living is easy. Most of the people are working all the time. They have a span of life of something less than 30 years. It is unrealistic to expect

people in that fix to solve difficult economic and population problems, to lift themselves by their own boostraps. There can be no change in such a people, in their manner of living as to raise their economic status until the barrier of massive ill health is removed.

Economic development is not only the objective of ECA, but is also the objective of the point 4 program in underdeveloped areas, and it has become obvious that programs must include health activities. As a matter of fact, the State Department in developing the point 4 program and the ECA in developing the impact program in southeast Asia, both agencies, were aware of the needs for public health programs in those areas. The Public Health Service, particularly this Division, has developed these programs and brought out their value before the authorities.

AID TO HEALTH SERVICES OF OTHER NATIONS

In addition I would like to bring to your attention the hazard of invasion of disease due to acceleration of air speeds and the growing volume of air transit in bringing to this country an increasingly large number of people. Many of them are infected but do not yet show any signs of illness. Pretty soon our main protection against many of their diseases must be through better control of disease in their own countries. We feel that this can be done most quickly through aiding them to develop and strengthen their own national health services.

The United States is trying to attain its objectives by utilizing the approach not only through the bilateral organizations but the multilateral. The Division of International Health aids the Department of State in bringing this country's influence to bear on the development of public health programs of the World Health Organization and of the Pan American Sanitary Bureau; we are commencing to augment the staff of the Institute of Inter-American Affairs which has been absorbed administratively by point 4. The Institute operates health programs in 14 Latin American countries and is developing them for at least 3 others. The Division of International Health plans, organizes, and directly operates the health programs for technical cooperation administration (State Department's point 4 program). Programs are being initiated or are under way in eight countries, are in the negotiation stage in five countries and programs have been suggested for an additional five countries. The Division plans programs and organizes and staffs the Health Division in the Special Technical Economic Missions which have been set up by the Economic Cooperation Administration in southeast Asia. Programs are actively under way in four of these countries, ECA is negotiating with two others, and a program is planned for the seventh. In addition, a health program is continuing in Greece and one has just been initiated in Turkey.

The other agencies of the Government, of course, supply funds for carrying out the programs and administrative funds for their direction. But the Public Health Service cannot await the allocation of such funds. It must have a permanent nuclear staff for prior planning and for those duties for which no administrative funds are available from other sources. The Division of International Health requires this irreducible minimum and that is the reason for our request for this $140,500.

REIMBURSEMENTS FROM OTHER AGENCIES

Mr. FOGARTY. Aren't you reimbursed from the State Department and the ECA for this work that you are doing for them?

Dr. WILLIAMS. Yes, they put up the money for the program and they give a certain amount of money for its administration, but if there was no existing Division there would be no spot on which to attach the activity and no prior planning.

Mr. FOGARTY. When they ask you to do this particular type of work, don't you tell them what the cost is going to be?

Dr. WILLIAMS. Yes.

Mr. FOGARTY. And what do they tell you?

Dr. WILLIAMS. Usually they advance me the administrative cost.

Mr. FOGARTY. They advance you what you ask?

Dr. WILLIAMS. Yes, but in the days when we plan the programs for point 4 and ECA just as when we are planning for the World Health Organization representation and the Pan-American Sanitary Bureau programs, there is no other agency to produce the administrative costs. There is a certain irreducible minimum of personnel we must have to keep the Division going in order to have a place, an area in which to hang these programs emanating from other agencies of government.

Mr. HARLOW. May I put it this way, Mr. Chairman. What Dr. Williams is talking about is the expense that is necessary before money becomes available for administration. In this Point Four business, for example, his people were working months before there was any point 4 appropriation.

Dr. WILLIAMS. Eighteen months before there was an appropriation.

Mr. DENTON. This is a comparatively small appropriation?

Dr. WILLIAMS. It is. Point 4 is 34½ million. The ECA program at this moment in southeast Asia, I believe, is larger than point 4. This is just getting under way. I believe this is a mushrooming program and we have got to stay ahead of it.

Mr. FOGARTY. If it mushrooms, it isn't going to be your responsibility.

Dr. WILLIAMS. Not entirely, but it is the responsibility of this Government's public health arm to plan for it and to aid the other governmental agencies. For instance, the President's Executive order calls on the agencies of Government, consistent with law, to give the maximum assistance to the State Department in the economic development program. We were planning for the impact programs for ECA, I should say, commencing about 9 months before the money was allotted to the ECA for those programs.

Mr. FOGARTY. I know they have done some good work in some of these countries.

Mr. DENTON. You only have 27 employees, and even if the point 4 and ECA give you the money, they have no health service over there. It looks to me like it would be just a drop in the bucket to what you could do.

Dr. WILLIAMS. Well, we feel like a drop in the bucket, sir, but one trained individual, for instance, in malaria control can take about 60 nationals of the country and perhaps in 3 weeks train them in the country as to what the mechanics of mixing are and how to apply the DDT and then send each of them out to organize teams themselves,

and it isn't long before 1, 3, or 5 of our trained people have got 200, 300, 400 people there at work.

They start work on the most immediate and simplest programs. These must be followed by more permanent programs. They are so designed that later nationals of each country can pick up the programs and expand them in the Public Health Service of each country.

NUMBER AND TYPES OF EMPLOYEES

Mr. SCHWABE. Dr. Williams, you have 27 people on your list.

Dr. WILLIAMS. Twenty-five.

Mr. SCHWABE. Twenty-five to be exact, or whatever it may be. Are they professional people?

Dr. WILLIAMS. Professional and clerical.

Mr. SCHWABE. About how many are professional?

Dr. WILLIAMS. I can tell you exactly, sir. Ten are professional, 15 are administrative and clerical.

Mr. SCHWABE. Those 10 who are professional, are they all physicians?

Dr. WILLIAMS. No, sir. Two are physicians; two are nurses; one is a sanitarian; two are public health advisers; one is a research analyst; one scientist; and one administrative officer.

Mr. SCHWABE. You are the only physician, then; is that the idea?

Dr. WILLIAMS. Well, there are two physicians there.

Mr. SCHWABE. Including yourself.

Dr. WILLIAMS. Including myself.

Mr. SCHWABE. How many of those are stationed here and how many of them abroad?

Dr. WILLIAMS. Of these, all are right here. This is the hard core nucleus I am trying to preserve, sir.

Mr. SCHWABE. Well, who goes abroad?

Dr. WILLIAMS. We have at present in southeast Asia, I think, about 30. We have in process of being cleared and oriented right now headed overseas, I think, 18 more. We have under orientation and clearance a pool of 50, and we have all the strings that we can get out trying to recruit more personnel.

Mr. SCHWABE. Where do these people get their money?

Dr. WILLIAMS. Funds come from the State Department and the Economic Cooperation Administration.

Mr. SCHWABE. Who selects them?

Dr. WILLIAMS. We select them.

Mr. SCHWABE. Are any of those professionals?

Dr. WILLIAMS. Oh, yes.

Mr. SCHWABE. Are any of them physicians?

Dr. WILLIAMS. A few are physicians, a minimum number of physicians, a considerable number of sanitary engineers, a considerable number of sanitarians; some are the nurses that Miss Arnstein was just talking about. Some are public health educators and some are sanitarians.

Mr. SCHWABE. Do all except you 25, then, get the money through the State Department; is that right?

Dr. WILLIAMS. Or ECA.

Mr. SCHWABE. Or both, as the case might be.

Dr. WILLIAMS. That is right.

METHOD OF SELECTION OF PROFESSIONAL PEOPLE

Mr. SCHWABE. And what is the method of selection of your group of professionals, the 10 referred to?

Dr. WILLIAMS. Some of them are Regular officers of the Public Health Service and some are Reserve officers of the Public Health Service, and some are on civil-service status.

Mr. SCHWABE. Will you submit for the record the names of the 10 and just a very brief background of their qualifications, and so forth.

Dr. WILLIAMS. I would be very happy to.

(The list of 10 names is as follows:)

DIVISION OF INTERNATIONAL HEALTH

LOUIS L. WILLIAMS, JR., Medical Director: Chief, Division of International Health; Physician; University of Virginia, 1913; entered U. S. Public Health Service, 1915, specialist in researches in malaria control; in charge USPHS Malaria Investigations, 1926; Head, Malaria Commission to China-Burma Highway, 1939; Liaison Officer to 4th Corps Area, U. S. Army, Atlanta, Ga., 1940; organized malaria control in war areas about camps and war industries 1942; detailed to U. S. Army, 1943; Malariologist, North Africa theater of operations; detailed to Office of Surgeon General USPHS, 1944; Liaison Officer to Department of State, 1945; Member, Delegation to International Health Conference, New York, 1946; Delegate, Pan American Sanitary Conference, Caracas, 1947; Health Advisor to United Nations Economic and Social Affairs of Department of State; Member, Organizing Commission 4th International Congress on Tropical Medicine; formerly Member, Malaria Commission of Health Section, League of Nations; Former President, National Malaria Society and American Society of Tropical Medicine; Fellow A. A. A. S.; Member, American Academy of Tropical Medicine, American Medical Association, Southern Medical Association, American Public Health Association.

HENRY R. O'BRIEN, Sr. Surgeon; Physician; AB, Washburn College, 1913; MA, Kansas University, 1915; MD, University of Michigan, 1919; M Mary Lucretia Phillips, 1926; MPH, Johns Hopkins, 1931; U. S. Public Health Service, 1920; International Health Division, Rockefeller Foundation, Siam, 1921; President, Board Foreign Missions, Chiengmai, Siam, 1926; Commissioner of Health, Lorain County, Ohio, 1931; New York State Dept. of Health, 1934; Commissioner of Health, Cattaraugus County, N. Y., 1935; Director of Local Health, Connecticut State Dept. of Health, 1941; U. S. Public Health Service, 1943; now Chief, Educational Programs Branch of the Division of International Health. Member American Public Health Association, American College of Surgeons, American School of Health Association, Royal Society of Tropical Medicine and Hygiene, Connecticut State Medical Society Conglist; Charter Member, American Board of Preventive Medicine and Public Health. Author of numerous scientific articles.

MARY D. FORBES, Senior Nurse Officer: Graduate Boston City Hospital School of Nursing; B. S., Major in Public Health Nursing, University of Minnesota; Public Health Nursing Supervisor and Administration, City Health Department, St. Louis, Mo.; Colorado Tuberculosis Association, Denver, Colorado; Cattaraugus County Health Department, New York; American Mission for Aid to Greece, Athens, Greece; Nursing Education, Missouri University and St. Luke's Hospital School of Nursing, St. Louis; Public Health Nursing Consultant, U. S. Public Health Service.

VIRGINIA ARNOLD, Senior Nurse Officer: B. A., University of Delaware; Ph. N. Certificate, M. S. and Certificate, Institute of VD Control, University of Pennsylvania; R. N., Johns Hopkins Hospital School of Nursing. Head Nurse, Psychiatric Clinic, Johns Hopkins; Staff Nurse, Visiting Nurse Society, Philadelphia; Fellowship Nurse, Institute of VD Control, University of Pennsylvania; Staff Nurse, Philadelphia Committee for the Prevention of Blindness; State Supervisor, Pennsylvania State Department of Health; Supervisor, Community Health and Civic Association, Ardmore, Pa.; Supervisor and Consultant, Philadelphia Department of Health; part-time Instructor, University of Pennsylvania; Public Health Nurse Supervisor, United Nations Relief and Rehabilitation Administration, Egypt and Greece; Acting Director, International Council of Nurses, London; Chief Nurse, Division of International Health, PHS.

MAURICE H. COBLENTZ, Sr. Sanitarian: AB, Johns Hopkins University, 1912; Chief Division of Chemical Technology, Baltimore City Health Department, 1925; Sr. Sanitary Engineer, Maryland State Department of Health, 1929; Sanitary Engineer, Corps of Engineers, Department of the Army, 1942; Water Security Officer, Commissioned Corps, USPHS, Southeastern States, 1944; Director, Department of Sanitation, Seattle, Wash. Health Department, 1945; Sanitary Engineering Consultant to the Housing Expediter, NHA, San Francisco, 1946; Asst. Chief, Technical Missions Branch, Division of International Health, USPHS.

PAUL S. HENSHAW, Scientist: AB, Southwestern College, Kansas, 1925; MS, University of Wisconsin, 1927; PHD, University of Wisconsin, 1930; LLD, Southwestern College, 1947. Biophysicist, Memorial Hospital, New York City, 1929; Sr. Radiobiologist, National Cancer Institute, Bethesda, Md., 1938; Principal Radiobiologist, Manhattan Project, University of Chicago, 1944, Oak Ridge, Tenn., 1945; Coleader, Atomic Bomb Casualty Commission to Japan 1946; Chief, Fundamental Research Branch, GHQ, SCAP, Tokyo, 1947; Assist. Chief, Division of International Health, USPHS, 1949. First Chairman of the Association of Oak Ridge Engineers and Scientists, Chairman-elect of the A. A. A. S., Gibson Island Cancer Conferences. Author of more than 60 scientific papers.

KNUD STOWMAN, Public Health Advisor: Ph. D., University of Copenhagen, Denmark. Captain with the American Red Cross in France and Italy, 1918; Chief, Division of Vital Statistics, League of Red Cross Societies, 1919; Chief, Epidemiological Intelligence Service, Technical Counsellor and Chief, Health Research Units in League of Nations, 1921–44; Chief, Epidemiological Information Service, UNRRA, 1945; Epidemiological Consultant, WHO, 1947; Foreign Affairs Advisor, Division of International Health, USPHS, 1949. Author of numerous monographs and articles on epidemiology and public health and medico-historical novels. UNRRA Representative at the International Health Conferference in New York; WHO Representative on several Commissions of the United Nations; U. S. Delegate to the Inter-American Statistical Conference at Bogota, Colombia; Member of the U. S. Delegation to the Second and Third World Health Assemblies. Co-organizer of the International Conference for the Revision of the Nomenclature of Diseases and Causes of Death after the 1st World War, receiving the Medal of Merit of the Swedish Red Cross.

RHEA RADIN, Public Health Advisor: A. B. University of California, 1931; A. M. University of Chicago, Public Welfare Admin., 1937. Office Executive, International Institute of San Francisco, 1932; Social Worker, San Francisco, 1934; Consultant on Naturalization Problems, Illinois State Commission on Citizenship and Naturalization, Chicago, 1936; Psychiatric Case Worker, San Francisco State Relief Admin., 1937; Case Work Supervisor, Travelers Aid Society, San Francisco, 1937; State Consultant on Nonresident Problems, California State Relief Admin., 1939; Community Service Consultant, Federal Security Agency, Washington, D. C., 1941; Labor Economist, War Manpower Commission, 1942; Chief, Plant and Community Service Section, Bureau of Manpower Utilization, 1943; with UNRRA, 1945–47, as Welfare Specialist, Displaced Persons Specialist, Deputy Director, Displaced Persons Division and Director, Care and Rehabilitation Division; Technical Consultant, Repatriation Division, International Refugee Organization, 1947; Legislative Representative of American Recreation Society, 1949; Health Program Analyst, Division of Public Health Methods and Public Health Advisor Specialist, Division of International Health, USPHS. Author of novel incorporating experiences during travel in Europe.

MIRIAM ZIONY, Research Analyst: AB Adelphia College; MA Sociology New York University, 1932; New York School of Social Work, 1932. Teacher, New York City Board of Education, 1930; Intake Interviewer, Temporary Emergency Relief Admin., New York, 1935; Sr. Interviewer and Research Assist., Railroad Retirement Board and National Research Project, 1936; Case Worker, Public Assistance Division, Dept. of Public Welfare of the District of Columbia 1940; Economic Analyst, Office of Price Administration; Social Science Research Analyst, Division of International Health, USPHS, 1949.

N. LUCILLE NELSON, Administrative Officer: Central High School, Washington, D. C.; Temple Secretarial School, Washington, D. C.; Washington College of Law; U. S. Dept. of Agriculture Graduate School, 1932–33. Temporary appointment in Dept. of Justice, Bureau of Investigation, April 13, 1917, to June 1917. War Dept. June 1917, October 1920; USPHS, October 1920 to present Stenographer to Administrative Officer.

Mr. SCHWABE. Do you have anything to do with the selection of these people who are paid for out of ECA funds or State Department funds?

Dr. WILLIAMS. Yes, sir. We use the recruitment facilities of the Public Health Service for selecting these people.

Mr. SCHWABE. What do you do with reference to ascertaining their loyalty?

Dr. WILLIAMS. They all must go through a check before they can be employed.

Mr. SCHWABE. Well, now, what is the check?

Dr. WILLIAMS. In the case of point IV, it is the State Department.

Mr. SCHWABE. What do you refer to as point IV?

Dr. WILLIAMS. Point IV is the technical cooperation assistance program. That is the State Department program, and they have the State Department check that is required by that law. It is an FBI check. It takes quite some time. ECA has a slightly quicker check.

Mr. SCHWABE. Do you say that all of those who are sent abroad are checked and screened carefully by the FBI?

Dr. WILLIAMS. It is an FBI investigation and the State Department check or an ECA check.

Mr. SCHWABE. But you don't mean that they are carefully screened, then, by the FBI, do you?

Dr. WILLIAMS. Oh, yes; very. The FBI makes the investigation. I think that is all the FBI does.

Mr. SCHWABE. Have they made this investigation that you are talking about and this screening of you and the other nine and the professional group of this 25 that is under your immediate supervision?

Dr. WILLIAMS. I can't tell you, sir, whether my check was made by the FBI or not; I think it was.

Mr. SCHWABE. If so, it was some time ago, doubtless.

Dr. WILLIAMS. No; recently, I was on detail at the State Department in 1945 and they must have made the check then.

Mr. SCHWABE. Have most of your group come from the State Department?

Dr. WILLIAMS. No. Most of this group have been in the Public Health Service for quite some years.

Mr. SCHWABE. Well, you spoke of your having come from the State Department.

Dr. WILLIAMS. No. I have been in the Public Health Service for about 35 years. I was detailed for a brief period to the State Department. That is the reason I know I had a check. The State Department would not show me any confidential material if I had not had a check. That is the only reason I assume I was checked.

Mr. SCHWABE. Do you have a list of the professionals that are engaged in this work who are paid out of State Department funds and/or the ECA funds?

Dr. WILLIAMS. Yes, sir.

Mr. SCHWABE. Will you furnish that for the record also?

Dr. WILLIAMS. I certainly will.

(The list referred is as follows:)

DIVISION OF INTERNATIONAL HEALTH

PERSONNEL PAID FROM OTHER APPROPRIATIONS

ECA appropriations:
Departmental:
Deibert, Austin, liaison officer
Kline, Howard, Chief, Technical Missions Branch

ECA appropriations—Continued
Departmental—Continued
Pletsch, D. J., Chief, Southeast Asia area
Deegan, J. D., operations officer
Field:
Greek mission:
Cherry, R. L., Mission Chief
Brown, Alton, sanitarian
Candage, Byron, engineer
Colwell, F. H., scientist
Courter, R. D., veterinarian
Fish, C. H., surgeon
Mark, R. S., sanitary engineer
Potter, Jeanette, nurse officer
Sullivan, P. J., surgeon
Willard, A. L. sanitary engineer
Willhoit, Margaret, nurse officer
Williamson, A. E.,
Turkey mission:
Kratz, F. W., Chief
Bridges, C. B., sanitarian
Hintgen, G. W., sanitary engineer
Burma project:
Allen, LeRoy, chief
Sheppard, O'D. H., venereal disease specialist
Harris, William W., venereal disease specialist
Isaacson, Sherwin, venereal disease specialist
Tallman, A. W., vaccine production officer
Sherrard, G. C., quarantine technician officer
Whiting, E. J., hospital architect
Carley, G. L., sanitary engineer
Feldhake, C. J., sanitary engineer
Indonesia project:
Jenney, E. Ross, chief
Murray, Lorena, nurse officer
Thailand project:
Coffey, E. R., chief
Griffith, M. E., entomologist
Indochina project:
Robbins, L. C., chief
Negherbon, W. O., parasitologist
Thorngate, George, hospital rehabilitator
Baker, W. C., entomologist
Lang, Sheldon, sanitarian
Braff, E. H., venereal disease specialist
Winkelstein, W., public health administrator
Jope, C. H., public health administrator
State Department:
Departmental:
McCall, H. R., engineer associate
Eason, J. C., Chief, Prog. Sec. TMB
Field:
Liberian mission:
Poindexter, H. A., chief
Bailey, V. M., sanitarian
Hargett, Florence, nurse officer
Howard, R. A., surgeon
Johnson, C. C., Jr., sanitary engineer
Keys, R. W., sanitarian
Lewis, J. R., surgeon
Mills, Mary L., nurse officer
Hines, G. W., public health engineer
Peruvian project:
Barbella, N. G., chief
Working fund:
Departmental:
Niblack, H. C., assistant chief, EPB

Mr. SCHWABE. The list of the names of those people.

Dr. WILLIAMS. Yes.

Mr. SCHWABE. One other question. All of the material that is used is furnished by the State Department or ECA funds also; is it not?

Dr. WILLIAMS. Yes, sir.

Mr. SCHWABE. In making these vaccinations and disinfecting programs, and so forth; is that right?

Dr. WILLIAMS. All supplies are purchased by those agencies; yes.

Mr. SCHWABE. Do you supervise that in any way?

Dr. WILLIAMS. No, sir. We develop the bill of needs and either ECA or the State Department actually purchases and delivers the supplies, except in a few programs in which they give us the supply money also, in which case we do the purchasing ourselves.

Mr. SCHWABE. They even supervise the distribution and the use of them except you may do it by remote control; is that right?

Dr. WILLIAMS. Well, it is done by our staff which we have recruited and assigned to these tasks overseas. We operate it directly for the technical assistance program.

Mr. SCHWABE. But you 10 professionals here in your immediate group of 25 do not go abroad and supervise this activity, do you?

Dr. WILLIAMS. We perform a little travel for some inspection purposes. And some by some of the individuals employed by these other funds.

Mr. SCHWABE. I think that is all.

MANAGEMENT AND CENTRAL SERVICES

Mr. FOGARTY. Thank you, Doctor.

Mr. Harlow, on "Management and central services," you show a decrease of 33 positions and the appropriation is the same, $2,170,000, and that savings effected by reduced employment is just offset by within-grade salary advancements and reserves under section 1214.

Mr. HARLOW. Yes, sir. I might say that in addition to those 33 you see there on our staff of what it was in 1948, we had at that time a staff of 580. Our reduction over the years has been almost 100.

Mr. FOGARTY. Since 1948?

Mr. HARLOW. Yes, sir.

Mr. FOGARTY. Are there any questions? Thank you very much.

FRIDAY, MARCH 2, 1951.

CERTAIN EMPLOYEES OF NATIONAL INSTITUTES OF HEALTH

WITNESSES

JOHN L. THURSTON, ASSISTANT ADMINISTRATOR, FSA
O. GLENN STAHL, DIRECTOR OF PERSONNEL, FSA
DR. PALMER DEARING, DEPUTY SURGEON GENERAL, USPHS
ALBERT F. SIEPERT, EXECUTIVE OFFICER, NIH, USPHS
ARTHUR McLEAN, ACTING CHAIRMAN, FSA LOYALTY BOARD
Dr. W. H. SEBRELL, Jr., DIRECTOR, NIH, USPHS
ROY HARLOW, FINANCE DIRECTOR, USPHS
WILLIAM MALLARD, SECURITY OFFICER, FSA
M. A. STEPHENS, BUDGET OFFICER, FSA

Mr. FOGARTY. The committee will come to order.

Some members of the committee had some questions about certain employees of Federal Security Agency and Mr. Busbey was particularly interested in them. That is the reason for the hearing at this time.

Mr. Busbey, do you want to proceed?

Mr. BUSBEY. Mr. Chairman, I wondered if, for the record, Mr. Stephens could supply the names of the gentlemen who are present at the hearing?

Mr. STEPHENS. Yes, sir.

(NOTE.—See list at beginning hereof.)

Mr. BUSBEY. It is my understanding that Mr. Ewing is still ill and Dr. Scheele is out of town.

Mr. STEPHENS. Until late this afternoon.

Mr. BUSBEY. Mr. Chairman, you will recall on the 19th of February I raised a question regarding three employees of the National Institutes of Health. It was my understanding, two of them were still employed by the National Institutes of Health and one had been removed. On the following day, Mr. Stephens, the FSA budget officer, furnished me with a brief résumé of the history of employment of these three people and I made the point at that time I did not think that would be sufficient, but I would like to go into the personnel files. Just a few minutes before 5 p. m., on Friday, February 23, I received a call from Mr. Ewing's office stating they had gathered together the personnel files on these three individuals and asked if it was possible to come up and see me at that time. I informed them that it was possible but I had a 5:30 appointment, and they also informed me that Mr. Ewing was taking a 6:15 plane out of the city. A few minutes later, Mr. Ewing, Mr. Stahl, and Mr. Siepert appeared at my office, room 420, Old House Office Building, with the personnel files and at that meeting I told them that after considering the matter over the week end, I thought it better that I not look at the personnel files individually but to have them brought into the committee where everyone of the committee would have the same privilege of seeing the files at the same time, if they cared to, as myself. I purposely made that suggestion because I did not want anyone to get the idea that any questions I might ask today were due to what I might have seen in the personnel files before we had the hearing.

Now, I am not so much interested in any one individual answering questions this morning as I am getting the information and in that way assisting the National Institutes of Health to clear up a situation that I do not think is too enjoyable to them. I noticed on the résumé of employment for Mr. Gerald Graze that he is listed as an O. and M. examiner for the National Institutes of Health, grade 14. To whom should I direct my questions with respect to these people? Mr. Stephens, you know more about the set-up than I do. To whom should I direct my questions?

Mr. STEPHENS. I think Mr. Siepert could better answer the question, Mr. Busbey.

Mr. BUSBEY. Fine.

Mr. Siepert, is that not a rather responsible and what might be termed a rather high-grade position?

Mr. SIEPERT. Yes, sir. May I make one amendment to indicate the present situation on that position? Mr. Graze was employed in October 1947, at grade 13, in a position of O. and M. examiner and was promoted to the position of assistant executive officer which is the position that he now holds.

Mr. DENTON. What is that O. and M.?

Mr. SIEPERT. Organization and methods examiner.

Mr. BUSBEY. What were the circumstances or occasion for Mr. Graze's employment by your agency, Mr. Siepert?

Mr. SIEPERT. At the time he was appointed, the National Institutes of Health was just going into a major period of expansion and reorganization. We felt that we needed a person who was unusually skillful in organization and methods work, particularly as it might have some relationship to research activities. Mr. Graze's name came to us in a group of applications that had been filed with the Public Health Service as a result of the cessation of operations of the OPA sugar-rationing program. As you will recall, at that time there were a large number of people suddenly reduced and I believe it was the policy of the personnel office then for their personnel to file applications in all of the going Government establishments. We sent out a request for a list of candidates who might be suitable for this position. Mr. Graze's application came to me in that connection. We made the usual reference checks that are a matter of standard policy in the Public Health Service, checked against the application Form 57, and the agencies for whom he had worked. Of all of the candidates that we examined, Mr. Graze's experience was clearly that most suited for our job. Accordingly, he was appointed.

Mr. BUSBEY. To your knowledge, do you know of any one individual that might have recommended Mr. Graze to your agency?

Mr. SIEPERT. I do not, sir. I believe your question is, Did someone initiate a recommendation referring him to me; is that your question?

Mr. BUSBEY. Not only initiate but after the application was filed, did anyone contact the agency individually and recommend him?

Mr. SIEPERT. I do not recall; no, sir. The contacts were initiated by us.

Mr. BUSBEY. I will put the same question to all of the gentlemen around the board. Does anyone here this morning know of any individual who might have recommended Mr. Graze?

(Short pause.)

I take it the answer is in the negative then.

Mr. THURSTON. I am not sure that I understand your question, Mr. Busbey. As I gathered from what Mr. Siepert said, there were a number of applications that came in. Your question is whether someone took the initiative to——

Mr. BUSBEY. I am trying to ascertain if before or after Mr. Graze filed his application with the agency, if someone outside the agency contacted anyone in the agency vouching for Mr. Graze and recommending him for employment in the agency.

Mr. STAHL. It is clear, of course, as Mr. Siepert said, that he contacted some people to find out their estimation of his work and his performance on previous Government jobs.

Mr. BUSBEY. I appreciate that.

Mr. SIEPERT. Everyone I could track down; yes, sir.

Mr. BUSBEY. Now would you look at his Form 57 and please give the names of the references that Mr. Graze gave under question No. 24?

Mr. STAHL. Yes, sir; I can answer that. The references which he listed under question 23 on this form—the form has been revised—were the following: Ismar Baruch, Chief of Personnel Classification, Civil Service Commission; Dr. Franklin V. Taylor, psychologist, Naval Research Laboratory; Phillip P. Marenberg, lawyer and management consultant, 2108 North Sixteenth Street, Arlington, Va.

In addition, of course, names were given of his supervisors in connection with each job he held, which is not on question 23.

Mr. BUSBEY. Did he give any additional names as references on his application form, outside of the job references?

Mr. STAHL. No, sir; there is nothing that appears on the application.

Mr. BUSBEY. What was the response of Mr. Graze to the question No. 27, I believe, that reads:

> Are you now or have you ever been a member of the Communist Party, U. S. A., or any other Communist organization?

Mr. STAHL. Which question number did you say that was?

Mr. BUSBEY. It should be 27, I believe.

Mr. STAHL. Again, the form has been revised, Mr. BUSBEY. The question as it appeared at the time when Mr. Graze apparently filled out his Form 57 reads like this:

> Do you advocate, or have you ever advocated, or are you now or have you ever been a member of any organization that advocates the overthrow of the Government of the United States by force or violence?

And he answered that, "No."

Mr. BUSBEY. Are you aware, Mr. Siepert, that Mr. Graze was investigated by the FBI after he was employed by your agency?

Mr. SIEPERT. Yes, sir; that would be standard procedure since he was appointed in October 1947, by us, subject to investigation.

Mr. BUSBEY. Have you read the reports of that investigation?

Mr. SIEPERT. No, sir; they would not be available to me under the loyalty program. I have not seen them.

Mr. STAHL. May I correct the testimony on one item just a moment ago? There is apparently one earlier copy of the Form 57 here in which one additional name is listed: Richard Gilbert, research director, Office of Price Administration. I thought these were all duplicates, but that evidently is not.

Mr. BUSBEY. I take it from Mr. Siepert's answer to my previous question that the answer to these next few questions will be in the negative, but for the sake of the record I will ask them anyway.

Are you aware of the fact that the investigation contained information alleging that Mr. Graze was at one time a member of the Communist Party underground in Washington, D. C.?

Mr. SIEPERT. No, sir.

Mr. BUSBEY. That is the investigation of the FBI.

Mr. SIEPERT. No, sir.

Mr. BUSBEY. At any time did it come to your knowledge that Mr. Graze might have been a member of the Communist underground here in Washington, D. C.?

Mr. SIEPERT. Not that specific information, sir. The only material that would have come to my attention in connection with my duties was the statement from the fourth civil service regional board stating that they were ordering his suspension because they had under consideration evidence of reasonable doubt as to his loyalty.

Mr. BUSBEY. Did it come to your attention that the fourth regional board of the Civil Service Commission have rated Mr. Graze ineligible?

Mr. THURSTON. May I say that this man's loyalty investigation was handled by the loyalty board of the fourth civil service region and that they made the determination and so advised us that Mr. Graze should be suspended, which was done. Subsequently, Mr. Graze appealed to the Loyalty Review Board and the action of the fourth civil service regional board was rescinded by the Loyalty Review Board and we were advised to reinstate Mr. Graze.

Mr. BUSBEY. You mentioned that the fourth regional civil service commission loyalty board advised you to suspend him. At the same time did they not also advise you that they had rated him ineligible for Government employment?

Mr. THURSTON. I assume that that was the basis for their advice.

Mr. BUSBEY. Did you not have any personal knowledge of it, Mr. Thurston, Mr. Stahl, or anyone else who can answer the question?

Mr. STAHL. That is correct. The letter from the fourth civil service region indicated that he had been rated ineligible. Then they proceed to indicate that if he appeals, and I am quoting:

> You are instructed to postpone his separation and carry him in a suspended status until his appeal is decided.

He did appeal.

Mr. BUSBEY. What date was he suspended and what date was he reinstated?

Mr. STAHL. He was suspended effective 4 p. m., December 16, 1948. He was returned to duty on February 7, 1949.

Mr. BUSBEY. December 16, 1948, and returned when?

Mr. STAHL. February 7, 1949. The suspension was on the basis of a letter from the Fourth Civil Service Region dated December 13; but it was received on December 15 at the National Institutes of Health; and the return to duty was based on a letter from the Loyalty Review Board signed by Mr. Seth Richardson on January 31, 1949, and received by the National Institutes of Health on February 3.

Mr. BUSBEY. When Mr. Graze was reinstated, you were required to pay him his salary for the time he was not working during his suspension; were you not?

Mr. STAHL. That is right.

Mr. BUSBEY. I do not think the reporter can always get the nod of your head for the record.

Mr. THURSTON. That is the normal procedure, as I understand it, Mr. Busbey.

Mr. BUSBEY. How much did that amount to in dollars and cents?

Mr. STAHL. We have no record of that here. We would have to check with the payroll records for that.

Mr. BUSBEY. Would you figure it out and supply it for the record, please?

Mr. SIEPERT. Yes, sir; we will do that.

(The requested information follows:)

NOTE.—His total salary for the period while he was under suspension was $843.

Mr. BUSBEY. Then is it a correct statement to say that the Government received no services for the sum of money paid Mr. Graze for the time he was suspended?

Mr. SIEPERT. Yes.

Mr. STAHL. May I point out that that procedure of restoring back pay to a man who has been on suspended status is based on an act of Congress which provides for that procedure?

Mr. BUSBY. I appreciate that and I also appreciate that your agency has no jurisdiction over that whatever.

Mr. STAHL. That is right.

Mr. BUSBY. Did the fact that the regional loyalty board of the Civil Service Commission had declared Mr. Graze to be ineligible on the grounds of questionable loyalty create a doubt in your mind as to his suitability for a responsible Government position?

Mr. THURSTON. May I say Mr. Busbey that the standard procedure is to make available to the agency or department involved some of the information some or all—I just literally don't know——

Mr. SIEPERT. All.

Mr. THURSTON. On which the Loyalty Board's judgment is based if that judgment is made by someone outside of the agency, as in this case it was—advice by the Fourth Civil Service Region that information is made available to permit an agency to review it for the purpose of determining whether precautionary measures or action should be taken—that is, before the normal procedure is concluded—and in this case, our Loyalty Board reviewed it and came to the conclusion in the light of the fact that the position at that time was not a sensitive one that they could appropriately wait until the formal procedure had been concluded—

Mr. BUSBEY. What do you mean by "the normal procedure," Mr. Thurston?

Mr. THURSTON. The first decision by the Civil Service Commission Board and then, under any appeal, review by the Loyalty Review Board.

Mr. BUSBEY. Arthur Flemming testified before the House Appropriations Committee on December 12, 1940, and, speaking not as an individual but for the Commission, informed the House Appropriations Committee "that all doubts regarding employment of employees are resolved in favor of the Government." Which to me means that he was stating a policy, and I do not think in this case that all doubts were resolved in favor of the Government.

Mr. STAHL. Would it be appropriate at that point to give you the wording of the statement sent to the agency by the Loyalty Review Board on January 31, 1949?

Mr. BUSBEY. I would be glad to have it.

Mr. STAHL. The statement is:

> Upon hearing additional testimony by the appellant and argument of his counsel thereon, and upon reviewing the evidence as set forth in the complete record, the panel members reached the conclusion that the evidence was insufficient to support a finding that reasonable grounds exist to believe Mr. Graze disloyal to the Government of the United States.

Mr. BUSBEY. Evidently that is one opinion that Mr. Richardson handed down where he did not use the words "presently disloyal," because I fail to detect it in that statement. But the sense of his statement would certainly mean "presently." That was the point I brought up earlier in the hearings when Mr. McIlvain was here, and what I have maintained all along was one of the weak points in the President's loyalty program. Section 1 of part V of the standards set down by the president in his Executive Order 9835 reads as follows:

> The standard for the refusal of employment or the removal from employment in any executive department or agency on grounds relating to loyalty shall be that, on all the evidence, reasonable grounds exist for belief that the person involved is disloyal to the Government of the United States.

And it is that one two-letter word they have been hiding behind down at the Loyalty Review Board for the past 4 years. It was the Loyalty Review Board under the new Chairman, Mr. Bingham, that passed a resolution recently asking that that provision be changed; and I have personally condemned Mr. Seth Richardson on many occasions for not taking the initiative to see that the present tense in that directive was not changed. And I think the Loyalty Review Board as it is presently constituted under Mr. Bingham deserves a lot of credit. I think, if the President sees fit to make that change as recommended by the Review Board, it will be quite beneficial to all the agencies of Government in getting rid of employees of questionable loyalty.

Mr. DENTON. Before you leave that, what does this man do now?

Mr. SIEPERT. Mr. Denton, Mr. Graze is assistant executive officer at the National Institutes of Health. That position is concerned with the administrative management of the bureau. By that, we mean the housekeeping services and the supporting laboratory services that are needed to supply research scientists to do their work. As assistant, he reports to me in my position as executive officer of the bureau.

Mr. THURSTON. Is it not true, at the time this was up, that he was primarily engaged in working on some construction activities out there?

Mr. SIEPERT. No, sir; not at the time the hearing matters came up. At that time he was an organization and methods examiner. The role that he filled was essentially the same one that I have described to you, Mr. Denton. It involved organizing these central administrative and technical services for the research area; and, as a part-time rather than full-time duty, it involved assisting us on construction details of the clinical-center program with which the committee is familiar.

Mr. BUSBEY. Mr. Graze was a P–13—was he not?—when he was rated ineligible by the——

Mr. SIEPERT. CAF–13.

Mr. BUSBEY. And, after he was reinstated, he was promoted to a CAF–14?

Mr. SIEPERT. Yes.

Mr. BUSBEY. Will you tell, for the benefit of the committee how a man who has been suspended under an order of ineligibility by the Fourth Civil Service Region Loyalty Board gets a promotion of that kind?

Mr. SIEPERT. He received that promotion, Mr. Busbey, after the President's Loyalty Review Board had given us the instruction to restore him to duty because they saw no grounds or insufficient grounds to declare him disloyal. At the time, the only question to be determined on his suitability for promotion was whether he was discharging the duties of that position which he was doing in a very admirable fashion. At the time of the promotion, there was no question as to the sensitivity of the position. At that time, in the National Institutes of Health, there was no administrative-management position of any kind in the National Institutes of Health which was considered to be a sensitive position.

Mr. BUSBEY. Regardless of the fact that he was rated ineligible, you still thought he was entitled to this promotion?

Mr. SIEPERT. I only thought, sir, that in my position as his supervisor I was to base my judgment on the facts which I personally knew. The only fact that I personally know concerning the loyalty of this man is that the Review Board has declared him loyal.

Mr. BUSBEY. After his suspension and rating of ineligible and the Loyalty Review Board refused to sustain the Fourth Regional Loyalty Review Board, did you or anyone in your agency take it upon yourself to make any further investigation of this man?

Mr. SIEPERT. No, sir.

Mr. BUSBEY. Did you at any time inquire of the FBI for information regarding this man?

Mr. SIEPERT. No, sir; I did not.

Mr. BUSBEY. Did anyone in your agency ever make inquiry to the FBI for information regarding this man?

Mr. SIEPERT. Someone else from the agency will have to answer that.

Mr. THURSTON. The FBI information, Mr. Busbey—all the FBI information that was available on this man—went to the Fourth Civil Service Loyalty Board. They made their judgment on the basis of that.

Mr. BUSBEY. That does not answer my question.

Mr. THURSTON. As I say, that information, copies of that information, came to the agency at that time, too, as I explained earlier; but the agency did not make a special request to the FBI to provide more information than it had provided to the Loyalty Board.

Mr. BUSBEY. Do you not think that, inasmuch as the Fourth Regional Loyalty Board had declared Mr. Graze ineligible regardless of the fact that the Loyalty Review Board did not sustain their findings, there was at least enough suspicion and information that should cause your agency to make further inquiry on your own behalf and particularly to the FBI?

Mr. SIEPERT. Mr. Busbey, on that, under the procedure, his legal status as ineligible was reversed by the finding of the Loyalty Review

Board, so that he was not ineligible after his restoration to duty. We have, all of us, as responsible people in the Government, an obligation to report incidents concerning employees in which there may be some question.

Mr. BUSBEY. You have an obligation to investigate on your own, too; do you not, Mr. Siepert?

Mr. SIEPERT. We have an obligation to report to the proper investigation authorities anything which we consider to be out of line. I found nothing.

Mr. BUSBEY. Let us have a direct answer to my question, please.

Mr. THURSTON. May I say, Mr. Busbey, when the case goes from the Civil Service Board to the Review Board, the Review Board at that time finds out whether there is additional information from the FBI. That is also in the hands of the Review Board.

Now, if we had additional information, Mr. Busbey, that would lead us to believe that this man or any man is disloyal——

Mr. BUSBEY. You are evading the question, Mr. Thurston.

Mr. THURSTON. I am not trying to.

Mr. BUSBEY. You are telling me procedure, and I am familiar with procedure, and I want an answer to my question.

Mr. THURSTON. I am not trying to evade your question, Mr. Busbey, at all.

Mr. BUSBEY. Well, give me an answer to it, then.

Mr. THURSTON. I believe, and again I say I am not trying to evade your question——

Mr. BUSBEY. Let me word it another way and make it a little easier for you. Since Mr. Graze was reinstated in your agency on February 7, 1949, what has your agency done on its own responsibility to determine the loyalty and suitability of Mr. Graze for Government employment?

Mr. THURSTON. We have not gone beyond the finding of the Loyalty Review Board.

Mr. BUSBEY. In other words, you have not done anything?

Mr. THURSTON. We have done something.

Mr. BUSBEY. What is it?

Mr. THURSTON. First, I wanted to give you a direct answer to your question. As I say, I do not want to appear to be evading it. We have two situations, as I see it. One is the question of disloyalty of a person; and another is the question of suitability of employment of a person in a particular job, especially a sensitive job. Now, in the case of Mr. Graze, since the international situation, since Korea, we have been reviewing positions throughout the agency, Mr. Busbey. We have established an agency security clearance board which has as its job the responsibility for reviewing jobs and people, not with respect to loyalty because there is machinery in the Government to handle that, but with respect to suitability on sensitive jobs, and Mr. Graze's job, as far back as last summer, along with other jobs, has been in the process of review to see whether in the present critical times if secret material comes through, or if highly confidential material comes through, whether individual A, B, C, D, or E is, without regard to loyalty or disloyalty, satisfactory as a security risk; and that we have done and we feel it is our responsibility to do and we are doing throughout the whole agency.

Mr. BUSBEY. You have a loyalty review board within the agency, do you not?

Mr. THURSTON. Yes, sir.

Mr. BUSBEY. Are you a member of that board?

Mr. THURSTON. I am not. Mr. McLean is.

Mr. MCLEAN. I am a member; Mr. Joseph McElva, is chairman; Mr. Charles Henderson is also a member.

Mr. BUSBEY. Is it not the function and responsibility of the loyalty board within your agency to check the loyalty on your employees?

Mr. MCLEAN. It is limited by the Executive order. We have the responsibility of determining loyalty with respect to some of our employees. With respect to some others, of whom Mr. Graze was one, the responsibility is initially in the regional loyalty board subject to review by the Loyalty Review Board. The reason for that distinction is—I have forgotten the exact date—but the agency has responsibility, the agency loyalty board has responsibility, for all employees who were employed prior to a certain date a couple of years ago.

Mr. STAHL. October 1, 1947.

Mr. MCLEAN. I think October 1, 1947. All such employees were considered or called employees, and we have the responsibility for them. In addition to that, the agency loyalty board has responsibility for such employees as are not subject to civil service. New appointees, however, are not subject to the jurisdiction of our agency loyalty board; they are under the jurisdiction of the appropriate regional loyalty board, subject to review by the Loyalty Review Board. Mr. Graze, although he has been in the Government 15 years, was in effect a new employee at the time of his appointment in the National Institutes of Health. What was behind that I do not recall—perhaps he had been out of employment or something like that, a break in service.

Mr. BUSBEY. Then, Mr. McLean, is it your testimony to this committee that your agency has no authority or right to make any inquiry to the Fourth Regional Loyalty Board or the FBI regarding any of your employees such as are in a position such as Mr. Graze occupies?

Mr. MCLEAN. I did not say that. I said we had no authority to make a decision as to loyalty because the Executive order provided that such decision is to be made in that kind of case by the regional loyalty board subject to review by the Loyalty Review Board.

Mr. BUSBEY. Do you mean to say that if a man whom you knew to be a member of the Communist Party in your agency, that you are prohibited from taking steps to get rid of him?

Mr. MCLEAN. Perhaps we did not understand each other, I thought the question was whether the agency loyalty board had the power to make a finding of disloyalty in a case. In this case the agency loyalty board does not enter into the picture. Although perhaps we have no formal standing as a court, it is a question of "which court has jurisdiction?" We do not.

Mr. THURSTON. I would like to answer Mr. Busbey's question and say "Yes," we can suspend in the case you cite. For example, someone who is known to be a member of the Communist Party, we can suspend that man; we can suspend people.

Mr. BUSBEY. The agency as such has not done one thing toward any investigation on Mr. Graze since he was reinstated.

Mr. THURSTON. No, sir, Mr. Busbey; that is not true. We have not reopened the loyalty investigation since by Executive order it

has been handled by the Loyalty Review Board, the top board of the Government.

With respect to Mr. Graze's suitability for employment in his current job, the agency has done and is doing something, not only with respect to Mr. Graze but with respect to these other top jobs throughout the agency that we feel need review at this time to determine whether the jobs are in a sensitive position, and whether, if the job is, whether the incumbent is someone whom we as an agency want to entrust in that sensitive position.

Mr. BUSBEY. In other words it is only, I take it from your testimony, if a man is in the sensitive position that you are concerned whether he is loyal to the Government or not.

Mr. THURSTON. No; that is not the case; we are concerned with the loyalty of every single person in the agency. There are cases where a person is declared to be loyal but where he still, in our judgment as responsible administrators, is not a good risk in a sensitive position, for a number of reasons. It might be that, for example, he drinks too much; that he talks too much. We do not want those men looking at secret documents. So if we found such a case, we would transfer him, without any respect to loyalty.

Mr. BUSBEY. But that would come under security, not loyalty?

Mr. THURSTON. Yes, sir.

Mr. BUSBEY. Many people fail to differentiate between loyalty and security. You are talking about security now?

Mr. THURSTON. But it is also true so far as I personally am concerned that a person may be—let me describe it this way: there may not be reasonable grounds to believe that a man is disloyal, but there may be reasonable grounds to believe that he should not be in a sensitive position.

Mr. BUSBEY. You are aware of the fact that this Seth Richardson board refused to sustain the finding on loyalty on Alger Hiss and William Remington, are you not?

Mr. THURSTON. I do not know about Alger Hiss, Mr. Busbey; it runs in my mind that the Remington situation is as you describe it but I just do not know about Alger Hiss.

Mr. BUSBEY. Let us confine it to William Remington for an example. The Seth Richardson board declared that Remington was not "presently" disloyal. When he came up for review after having been declared ineligible by an agency of the Government——

Mr. THURSTON. That is my understanding.

Mr. BUSBEY. I think this next question should be directed to Mr. McLean, probably, inasmuch as he is a member of the loyalty board of your agency, but I will make it general anyway.

Are you aware of the fact that Gerald Graze's wife was released from the War Department as a security risk?

Mr. MCLEAN. I am not presently aware of it. I did have occasion to see, as a member of the loyalty board, I had occasion to see the FBI reports that were sent to us prior to the hearing by the fourth region. If that information was in that report, then of course I was then aware of it.

Mr. BUSBEY. Do you not make any record for your own information?

Mr. MCLEAN. We are not permitted to keep a record of the FBI reports.

Mr. BUSBEY. Do you recall if that report showed that his wife was a member of the Washington book shop which has been declared as a subversive Communist organization by the Attorney General of the United States?

Mr. MCLEAN. I do not recall, Mr. Busbey; I have seen literally thousands of reports on thousands of people and they range all the way from membership in the book shop to knowing somebody, to having lived next door to somebody, and I cannot possibly remember all those details.

Mr. BUSBEY. I am not talking about hearsay or rumor.

Mr. MCLEAN. I am not talking about rumors or such information. I get so much information on so many people I can't remember it all.

Mr. BUSBEY. How about you, Mr. Siepert?

Mr. SIEPERT. I do not see the material, Mr. Busbey. It does not come outside the channels of the board.

Mr. BUSBEY. Did you see it, Mr. Thurston?

Mr. THURSTON. To my knowledge I did not.

Mr. BUSBEY. Inasmuch as Mr. McLean is the only member of the loyalty board here this morning, I had better direct my questions to him, then.

Mr. McLean, are you aware of the fact that a brother of Gerald Graze was released from the State Department as a security risk?

Mr. MCLEAN. I should say also, Mr. Busbey—I think my previous answer has not affected this—that I am not permitted to divulge what was in the FBI files and I would not therefore be able to say what I was aware of or not aware of so far as the FBI files are concerned.

Mr. BUSBEY. Well, outside of the FBI files, are you aware of the fact that a brother of his was released from the State Department as a security risk?

Mr. MCLEAN. I am not so aware. Any answer here is without reference to the FBI files.

Mr. BUSBEY. Are you aware of the fact that another brother of Gerald Graze is reputed to be a member of the Communist Party in New York and is alleged to be active in the Civil Rights Congress?

Mr. MCLEAN. No, sir.

Mr. BUSBEY. Mr. McLean, or Mr. Thurston, assuming the information regarding Gerald Graze, his wife, and brothers, to be true, would you say that Gerald Graze is suitable for Government employment?

Mr. THURSTON. That is a question, Mr. Busbey, that I think I should be permitted to elaborate on. As I said many times, I do not wish to appear to be evading your questions on this important issue.

Mr. BUSBEY. I will say it is very important.

Mr. THURSTON. I believe that an individual's relationship with others of known disloyalty——

Mr. BUSBEY. We are talking about his immediate family now, his wife, his brother.

Mr. THURSTON. I think that an individual's relationship with persons of known disloyalty is a very difficult buttress to use in supporting a charge of disloyalty against an individual.

Now, I did not take your question necessarily to mean: would I think that someone who is closely related to a disloyal person, as-

suming the person to be disloyal, is himself disloyal just on that evidence.

Mr. BUSBEY. I did not say that. That was not my question.

Mr. THURSTON. I did not assume that to be your question.

Mr. BUSBEY. I said, assuming the information regarding Gerald Graze, his wife and brothers to be true, would you say that Gerald Graze is suitable for Government employment?

Mr. THURSTON. You are refering also to the evidence on Gerald Graze. I must say that I do not know the evidence for or against Gerald Graze.

Mr. BUSBEY. Temporarily, let us forget about Gerald Graze as an individual; let us put it on anyone. If any individual who had a wife and a brother who might have had this background and had been suspended and declared ineligible by a regional loyalty board, do you think that individual is suitable for Government employment?

Mr. THURSTON. I think, Mr. Busbey, that if he had been declared ineligible by a loyalty review board, he would not be suitable for Government employment. But I think that if his case had been appealed to a duly constituted body which sat in review, and that body said in effect that the lower body erred and that the person was not in fact disloyal, and that reasonable grounds did not exist to believe him to be disloyal, you have a different situation from the one you presented.

Mr. BUSBEY. Well, I would say that you have evidently a great deal more confidence in the so-called regularly constituted body of the Government in this case known as the Loyalty Review Board than I do because there have been hundreds of cases where employees have been declared ineligible where this Seth Richardson board refused to sustain the agencies, and what I am trying to do is bring about a condition where these agencies can be sustained when they know a person to be disloyal.

In other words, I am trying the best I know how to help your agency and every agency in Government.

Mr. THURSTON. May I go off the record for 1 minute, Mr. Chairman?

Mr. FOGARTY. Yes.

(Discussion off the record.)

Mr. BUSBEY. I take it from your testimony, Mr. Thurston, that you were satisfied with the decision of the Seth Richardson board in the Gerald Graze case?

Mr. THURSTON. I did not have anything to do with the decision. I am just now introduced into this problem and I do not see how I can say whether I am satisfied or dissatisfied with the decision.

Mr. BUSBEY. Are you satisfied, Mr. McLean, with the decision of the Seth Richardson board in the Gerald Graze case?

Mr. MCLEAN. I, of course, do not know——

Mr. DENTON. I think that is rather unfair, Mr. Busbey. These people work for the Government; that is rather an unfair question.

Mr. BUSBEY. I will withdraw it.

Mr. McLean, what do you know of Gerald Graze's association with a man by the name of David Wald?

Mr. MCLEAN. Speaking always without reference to the file, although frankly, I do not remember what was in the file, I know of no such association.

Mr. BUSBEY. Do you know of any association with a woman by the name of Mary Jane Keeney?

Mr. MCLEAN. I think I can answer all such questions by saying that without reference to such things as I may have read in the FBI file, I know of no associations of a dubious nature. Of course, I have seen Mr. Graze around the Government for 15 years.

Mr. BUSBEY. Mr. Thurston, because of the fact that I have raised a question of the suitability in the employment of Gerald Graze within your Agency, what, if any, steps do you think should be taken by your agency to reopen the case of Gerald Graze?

Mr. THURSTON. I assume you do not refer to reopening the loyalty case. If you are talking about suitability of employment of Mr. Graze, I would say again what I said before, that I think we have a responsibility with respect to Mr. Graze just as we have with respect to all major positions at this time to assure ourselves of the security of individuals in important places in the Government.

Mr. BUSBEY. How about the unimportant places? I would not say a CAF–14 is an unimportant employee of the Government.

Mr. THURSTON. No; I would not, either. That is my point. I am saying that Mr. Graze, along with a number of others—I do not know, there may be hundreds, I dare say hundreds and hundreds in our agency—who will have to be reviewed for suitability in important positions. I can give you an example, may we go off the record for a minute?

(Discussion off the record.)

Mr. THURSTON. I want to say that on this question of suitability we are not taking any chances on assuring ourselves that people who have to handle important classified, secret, and so on, documents are entirely suitable to be in those positions.

Mr. BUSBEY. Under the circumstances, do you not think it is an obligation of the Agency to contact the FBI and the regional loyalty board to ascertain if they might have some additional information in their files regarding Mr. Graze?

Mr. THURSTON. I should like to be corrected if I am wrong by Mr. Mallard, our agency security officer—but in the review I have just been discussing concerning suitability and sensitive positions, you are at liberty and in fact would from time to time, if you had reason to believe there would be additional evidence to ask for a further check by the FBI.

Mr. MALLARD. Yes, that depending again on the sensitivity of the position as declared by the people in authority over that position.

Mr. THURSTON. But the answer is that we do ask for additional information from the FBI. I know that I, myself, have asked for special clearances on people.

Mr. MALLARD. We are right now processing and trying to get additional information.

Mr. STEPHENS. On or off the record, in my case, just to illustrate what they are talking about, this thing got going after Korea and I had to handle a bunch of Coast Guard stuff for Public Health and other classified documents and I was actually excluded from seeing documents, that normally I would see, until I was cleared on December 4. I checked with Mr. Mallard time and again and told him that I was not a traitor. He came along on December 4 and told me some of the agencies involved in the checking, such as FBI, Central

Intelligence, Army, Navy, Civil Service, regional loyalty boards, and everybody. He told me, "You can't get that card and get cleared until all this is done." That is in my case, and on December 4, I was told that I was a good security risk and could handle these documents.

Mr. BUSBEY. For your information, several Members of Congress are quite concerned over the problem of why the people on the Nimitz Board that the President has recently set up are permitted to see these files of the FBI when regularly constituted committees of Congress are not permitted to see the files.

Now, Mr. Mallard, do you contemplate asking for any additional information of the FBI and the fourth regional loyalty board on Mr. Graze?

Mr. MALLARD. On Graze?

Mr. BUSBEY. On Graze.

Mr. MALLARD. If Dr. Sebrell says his position is sensitive and we need clearance, security clearance in that position, we will.

Mr. BUSBEY. And if the position is not sensitive, which has been testified to this morning that it is not sensitive, I take it you do not contemplate making any further inquiry regarding Mr. Graze?

Mr. MALLARD. Except for the sensitive position, the sensitivity of the position, we consider that to be the duty of the Loyalty Review Board.

Mr. BUSBEY. What about the importance of this position, CAF–14?

Mr. MALLARD. That is Mr. Siepert's position.

Mr. BUSBEY. How about that—to you, Mr. Siepert?

Mr. SIEPERT. I would like to make a distinction here between responsible and sensitive. There has been no question in our minds that Mr. Graze's position has been a responsible one throughout all of the period of his employment. There have been several findings.

Mr. BUSBEY. And I gather that he is an efficient employee in the position he is in?

Mr. SIEPERT. Yes; but that is not under discussion here.

Mr. BUSBEY. I might also state that Mr. Alger Hiss and Mr. William Remington were both very brilliant and efficient men.

Mr. SIEPERT. But I think we need to differentiate here between responsible and sensitive. A sensitive position is responsible, it is true; but it is also one in which the discharge of the duties of that position require that the individual have access to classified material. That situation has not obtained with respect to Mr. Graze up to the present time. He has had no access to classified material and no reason for access to it. The point Mr. Thurston was making is that what I have just said on Mr. Graze is true of a number of positions in the Federal Security Agency. But as we get more and more concerned with defense activities, it is incumbent upon us to check again to see which of these responsible positions have in them an element of sensitivity requiring access to classified material, and under that procedure, Mr. Graze's position is being evaluated as are others.

Mr. BUSBEY. Is it not quite possible that Mr. Graze might transfer to some other division of your Agency or some other agency of Government in the future?

Mr. SIEPERT. Yes, sir; he could.

Mr. BUSBEY. Well, the mere fact that he is employed in your Agency and your Agency does not seem to care about going into his

record might be a recommendation on the face of it to accept him in another agency, would it not?

Mr. SIEPERT. With respect to loyalty, I believe that would be right, sir.

Mr. THURSTON. I should like to say, Mr. Busbey, that when you say the Agency does not want to go into his record that should be taken, it seems to me, in light of what we have said about how his record has been gone into under the organized loyalty procedure and that when you get to the question of suitablity in a sensitive job, his record will be gone into if it is found that he is in a senstive job.

Mr. STAHL. May I add that that would be true in another agency. If he should resign from this Agency or transfer to another agency, if that agency was considering him for a sensitive position, they would institute the regular process for security clearance that they would happen to have.

Mr. SCHWABE. Or should do so.

Mr. THURSTON. They are required to.

Mr. STAHL. They are required to.

Mr. BUSBEY. Mr. Stahl, do you not think some effort ought to be made by everyone to see that no one in any position where there is a question of loyalty involved is employed in any department of our Federal Government. I maintain it is a privilege and not a right to work for your Government.

Mr. STAHL. That is right.

Mr. THURSTON. I agree with that completely.

Mr. BUSBEY. Do you not think there is a certain responsibility and obligation on the part of every agency to see that everything is done to eliminate anyone of questionable loyalty?

Mr. STAHL. Absolutely. There is no doubt about the loyalty aspect with respect to any position.

Mr. BUSBEY. The fact that I first mentioned Gerald Graze on February 19, and we are getting around to it now, I think is proof enough that I did not want to catch anybody unprepared or not know what was coming; is that not right? Mr. Stahl, there was no secret as to what was coming up this morning?

Mr. STAHL. That is correct, surely.

LETTERS OF CLEARANCE

Mr. BUSBEY. Now, will someone sitting around the table tell me in detail just what has been done by your Agency in regard to contacting other agencies where Gerald Graze had formerly been employed in an attempt to get letters of clearance from them?

Mr. SIEPERT. I do not believe that is my question because it would be handled by the Security officials.

Mr. STAHL. You mean letters of clearance or reference?

Mr. BUSBEY. Letters that would refer to him as a loyal employee or clearance, or call it what you may. Someone in your Agency has had someone contacting other agencies of Government, since February 19, where Gerald Graze has been employed, trying to get certain letters from those agencies.

Now, what was back of that? What were they trying to get? I want to explore that.

Mr. STAHL. I have no knowledge of that myself.

Mr. THURSTON. I should like to say that I have no such knowledge. You mean since February 19, someone in the Agency——

Mr. BUSBEY. Since February 19.

Mr. THURSTON. Someone in the Agency you believe has asked other agencies for information about Graze?

Mr. BUSBEY. I will put it this way: information has come to me that someone in the Federal Security Agency has been sent to these other agencies in which Gerald Graze has been employed trying to get certain letters from these other agencies that would help substantiate Gerald Graze's suitability for employment in the Federal Security Agency.

Mr. THURSTON. I know nothing of that whatever.

Mr. SIEPERT. Neither do I.

Mr. STAHL. I do not know of any such action.

Mr. SIEPERT. I have no knowledge of that, Mr. Busbey. If I may express a personal opinion here, I do not see how the agency concerned would be in any better position than we under the loyalty procedure to give a finding as to a man's loyalty or disloyalty.

Mr. BUSBEY. Do you know of any such man running around to various agencies, Mr. Mallard?

Mr. MALLARD. I know of no such thing.

Mr. BUSBEY. Mr. McLain?

Mr. MCLAIN. Certainly not.

Mr. THURSTON. I should like to say, Mr. Busbey, that we will investigate that to see if we can throw some light on it.

Mr. BUSBEY. I would appreciate it if you would, and give the committee a report on it, Mr. Thurston, because I do not think my information is erroneous.

Dr. DEARING. Speaking as Acting Surgeon General, I am sure that that has not been done officially by anybody. If anybody is doing it, they are doing it on their own and it is not an official act for the Public Health Service.

Mr. BUSBEY. I do not think it would be too much of an ordeal or task to ascertain who it is and what has been done along that line.

(The following was submitted:)

None of the witnesses at the hearing has any such knowledge or believes it likely that an FSA representative, as Mr. Busbey suggests, made such contacts. A thorough check of all possibilities indicates the following:

(*a*) No representative in the personnel offices throughout the Federal Security Agency made such a request.

(*b*) Miss Mary S. Milton, secretary to the Chairman of the FSA Loyalty Board, has reported that she made a routine telephone inquiry of the fourth civil service regional loyalty board to verify the date the regional board ordered the suspension of Mr. Graze.

(*c*) Mr. Graze, under direct questioning, stated that he knew of no such request being made.

(*d*) The Public Health Service security officer, Mr. James J. Hott, has been in contact with the appropriate investigative agencies in an effort to obtain the latest files of information on Mr. Graze and Mr. Miller. These are the normal lines of request followed by the security officer when anyone brings matters of potential security to the Surgeon General's attention, such as was done by Congressman Busbey in the hearing of February 19. However, Mr. Hott never makes such requests to the operating agency in which the individual may have been previously employed, unless such agency has investigative facilities of its own.

(*e*) In the afternoon mail of March 2, the National Institutes of Health received a letter, dated March 1, 1951, stating that Irving Miller "has been rated eligible on loyalty for Federal employment." The letter (copy attached) is

signed by Robert A. Maurer, chairman, loyalty board, fourth United States civil service region, and addressed to the "Director of Personnel, National Institute of Mental Health." It may be that this is the "letter of clearance" to which Mr. Busbey refers. If so, the letter was not solicited by any officials of the National Institutes of Health. In fact, the addressee is in error since there is no Personnel Director of the National Institute of Mental Health. In any event, this confirmatory letter would appear unnecessary since the file, which came to the NIH after Mr. Miller's transfer, shows the loyalty review board had given clearance on loyalty grounds in 1949. The FSA Loyalty Board in November 1950 reviewed FBI information on Mr. Miller, but decided no action was necessary and forwarded the material, as requested, to the fourth regional board.

Mr. BUSBEY. Now, hurriedly I would like to take up the case of Irving Miller. What were the circumstances or occasion for Mr. Irving Miller's employment by your agency. The Irving Miller appointment is one which was completed last summer. Do you have the dates there, Mr. Stahl?

While he is looking that up, I would like to say that I think this subcommittee on appropriations has a responsibility in appropriating funds to these different agencies and should not appropriate money to people who in their opinion should not be in the employ of the Government.

Mr. FOGARTY. I think we should keep the record straight always, Mr. Busbey, that the Appropriations Committee has nothing to do with loyalty procedures set up by the Congress; that is not our business as a committee; that is the business of the Congress as a whole and if there is something wrong with the loyalty procedure, that is something the Congress has to change and that is something we, as a committee, have no jurisdiction over.

Mr. BUSBEY. That is where it generally comes to light.

Mr. FOGARTY. I think we ought to keep that clear.

IRVING MILLER—STATISTICIAN

Mr. SIEPERT. With respect to the Miller case, Irving Miller was employed by the National Institutes of Health in August 1950.

Mr. SIEPERT. Do you not have him listed as a transfer?

Mr. STAHL. Appointed by transfer from the Department of Labor.

Mr. SIEPERT. Currently employed as a statistician, GS–11, National Institute of Mental Health—in the National Institutes of Health. That is a program which, as you know, is beginning to expand its research activities and Mr. Miller came on as a part of its normal expansion.

Mr. STAHL. We have here the application 57 for any information you may care to inquire about.

Mr. BUSBEY. Is it not a fact that Mr. Miller was recommended by Gerald Graze?

Mr. SIEPERT. Not to my knowledge, sir; nor do the files indicate that.

Mr. STAHL. No.

Mr. BUSBEY. Who in the Mental Health Institute, would know whether or not Gerald Graze recommended Mr. Miller for employment in your agency?

Mr. SIEPERT. I presume his immediate supervisor might have a more categorical statement, yes or no, on that, than I.

Mr. BUSBEY. Would you make inquiry and if you find out anything that will add light to my question, furnish it for the record?

Mr. SIEPERT. I will furnish it in either event, sir.

(The information requested follows:)

Mr. Graze has stated that he had no connection with the Miller employment, and no acquaintance with him. The National Institute of Mental Health states that Mr. Miller came to their staff initially on the referral of his name by Dr. Harold Dorn of the NIH. Dr. Dorn had taught a course in statistics at one of the local universities and Mr. Miller had been one of his better students.

Mr. BUSBEY. Now, let us refer to Mr. Miller's application on Civil Service Form 57 and have read into the record the names listed by Mr. Miller as references under question No. 24, I think it is, of the new form: it may be question 23 on that one.

Mr. STAHL. Twenty-six on this one.

Mr. BUSBEY. Let us have that.

Mr. STAHL. The form has been changed from time to time. This is the version of the form that was dated June 1946. It is a little older than the other one, older than otherwise would have been used for an application. I presume it was filled out last summer. Question 26 there:

Do you advocate or have you ever advocated or are you now or have you ever been a member of any organization that advocates the overthrow of the Government of the United States by force or violence?

The answer is "No."

Mr. BUSBEY. I was coming to that question. I was on the question of references.

Mr. STAHL. I beg your pardon.

Mr. BUSBEY. I was going to ask that question so we will let it stay in the record.

Mr. STAHL. I was looking at that one, and the references given in answer to that question on references are: Emil D. Schell, who is Chief of the Mathematics and Electronic Branch, Office of the Controller, United States Air Force; Dr. John H. Smith, head of the Statistics Department, American University, Washington, D. C.; Dr. Harold F. Dorn, biometrician, National Cancer Institute of the National Institutes of Health. That is the most recent Form 57. I do not know whether there are any other names on the old ones he had when he went to the Labor Department. I will have to pick those out. Do you want those?

Mr. BUSBEY. Any reference at all that he gave, I want.

Mr. STAHL. These ones I am giving you are in answer to that one question. They do not include supervisors he listed in connection with jobs he held which are the ones that are contacted.

Mr. BUSBEY. The ones I am interested in particularly are those not including his supervisors.

Mr. STAHL. Here is another application which was used apparently back in support of it when he took the civil service examination and subsequently was employed in the Labor Department. I cannot find any references on that one. Here are references on a sheet that is attached. He makes an attached supplement. He lists five names. He lists: Mr. Edgar L. Warren, Director of Conciliation, formerly chairman, apparently of the Railroad War Labor Board.

Dr. DEARING. Regional Board.

Mr. STAHL. Earl E. Edgar, instructor in social sciences, apparently—this is abbreviated—University of Chicago; Mr. Nicolo Pino, economist, also formerly with RWLB and apparently now with the War Labor Board at San Francisco. I say "now," meaning at the time this application was filled out. Mr. Jack M. Elkin, Chief Statistician, Railroad Retirement Board; Mr. Joseph J. Santuria, economist, also apparently connected with the Railroad Retirement Board.

I will see if there are any other applications here in which references are made. This is a duplicate; it has the same five names on it. There appear to be no others.

Mr. SIEPERT. May I make one comment with respect to the other applications in the file? The only references, the only recommendations that would be available to the employing agency in this case the National Institutes of Health, at the time of his transfer would be the references read from the first application in that this other material is with the permanent file of the employee and remains in his former agency until the actual transfer is consummated and the files are turned over to us.

Mr. STAHL. That is correct.

Mr. BUSBEY. Mr. McLean, are you familiar with the list of organizations classified as subversive by the Attorney General under Executive Order 9835, commonly referred to as the President's loyalty program?

Mr. MCLEAN. Generally familiar; I would not be able to say with regard to every organization. But I am generally familiar with it. I have access to it on need.

ORGANIZATION WITH WHICH MR. MILLER WAS AFFILIATED

Mr. BUSBEY. Are you aware of the fact that the Attorney General designated the following as among those organizations: Abraham Lincoln School?

Mr. MCLEAN. I think I remember that as one of them.

Mr. BUSBEY. American League for Peace and Democracy?

Mr. MCLEAN. I believe that is on the list.

Mr. BUSBEY. American Peace Mobilization?

Mr. MCLEAN. I am quite sure that is on the list.

Mr. BUSBEY. Washington Book Shop?

Mr. MCLEAN. I am sure that is on the list.

Mr. BUSBEY. Washington Committee for Democratic Action?

Mr. MCLEAN. I believe that is on the list, yes.

Mr. BUSBEY. I will state for the record that Mr. McLean's beliefs are correct; they are all five on the Attorney General's list.

Mr. McLean, did your loyalty board make or cause to be made any inquiry of Mr. Irving Miller before he was appointed?

Mr. MCLEAN. No; it is not one of the functions of the loyalty board to do that. He was already an employee of the Government and we simply have not the responsibility in that area. Had we received an FBI report or field investigation to be considered by us in his capacity as an employee before this date, a couple of years ago, or as a new appointee outside of the civil service, we would then have considered it our responsibility; as the case was, we had no reason for considering it.

Mr. BUSBEY. That bears out exactly what I said in regard to responsibility of your agency in regard to Gerald Graze in the event he should go to some other agency of the Government.

Mr. STAHL. May I point out, Mr. Busbey——

Mr. MCLEAN. Just a moment. The loyalty board does not determine which job is sensitive.

Mr. BUSBEY. Was it the function of your loyalty board in regard to——

Mr. MCLEAN. With regard to the categories of employees I have mentioned, with persons employed prior to this close-down date, and with regard to new employees who are not subject to civil service, it is our function to consider reports which are sent to us by the Civil Service Commission, from the FBI through Civil Service Commission, reports of full field investigations. Those reports, we look at those reports; if there is no information which raises a question, we simply close the case. If a question is raised, we go through the appropriate proceedings, usually a hearing, and have a hearing and decide whether there are reasonable grounds for believing an employee disloyal.

Mr. BUSBEY. Who looks at those, the loyalty board?

Mr. MCLEAN. We have a hearing where there is a reasonable ground for having a hearing.

Mr. STAHL. Mr. Busbey, the National Institutes of Health, in determining upon the selection of Mr. Miller for appointment out there, went through the normal procedures to ascertain from the Department from which they expected to transfer him whether or not loyalty clearance had been completed, and they did get a report from the Labor Department that the investigation and determination under Executive Order 9835 had been completed and that he was cleared.

Mr. BUSBEY. Did the Department of Labor tell you that Mr. Miller had been found of questionable loyalty by their loyalty board, suspended, and later restored by the Seth Richardson board?

Mr. STAHL. I do not know. Do you know whether or not they knew that before he was appointed out there?

Mr. MCLEAN. As a matter of fact, I think I can help to answer that. I believe the requirements of the President in his loyalty program are that the information to be given is what the status of the individual is; has this person been cleared on loyalty grounds? Not whether somebody said he was disloyal and somebody decided he was not. The steps in the process are not part of the information normally transmitted by the department to a prospective employer.

Mr. BUSBEY. That is what I am trying to get at here becuase I have no desire whatever to embarrass your agency in this matter; but something should be done.

Are you aware of the fact, Mr. McLean, that the investigation of Irving Miller brought to light his affiliation with the five organizations I mentioned a minute ago?

Mr. MCLEAN. I do not recall anything in the FBI report and would not be permitted to divulge it if I did.

Mr. BUSBEY. Disregarding any decision of the Seth Richardson board, are you of the opinion that anyone who has affiliated with the five organizations just mentioned is a fit and suitable person to have in Government employment?

Mr. MCLEAN. You are asking me?

Mr. BUSBEY. Yes; just a point of information.

Mr. MCLEAN. I would have to say what I think any member of a loyalty board might say, that we would never make a categorical answer. You have to examine all the circumstances, all the facts of every case before you can make a decision.

Mr. BUSBEY. We have talked about five organizations that have been declared subversive by the Attorney General of the United States. Do you think that anyone who has been affiliated with those five organizations should be employed by the Federal Government—forget about Irving Miller—I am speaking generally.

Mr. MCLEAN. I would say that I or any other member of a loyalty board might say that there was a basis for a hearing if he belonged to all five organizations, but I would not be prepared to say categorically that the mere fact of such a connection, or rather allegation of such connection, would be a basis for an adverse finding. I think we have to get the facts before we make a decision.

Mr. BUSBEY. I agree with you there; but we are assuming those are the facts. Do you still think that man is suitable for employment in the Federal Government?

Mr. MCLEAN. I would say if I were an employing officer, and he were applying to me, I would not employ him.

Mr. BUSBEY. In other words, he is not suitable for Government employment if he is a member of those organizations according to your own statement.

What is your opinion on that, Mr. Thurston?

Mr. THURSTON. My opinion——

Mr. BUSBEY. We are not talking about Irving Miller, but about a hypothetical case here.

Mr. THURSTON. I do not mind giving you my opinion very forthrightly I would be very suspicious of somebody who had an affiliation with those five organizations.

Mr. BUSBEY. You would only be suspicious?

Mr. THURSTON. I would be. There are affiliations and affiliations, as you know. There are no doubt a large number of people who get sucked in to belong to this or that. It has happened to the most responsible Members of the Congress and the Nation at large. That is one kind of thing. If you are saying that the facts that are assumed here show that this chap, individual X, was really affiliated, heart and soul in these outfits, and that he knew what he was doing and knew that they were Communist-front outfits, under those circumstances——

Mr. SCHWABE. Knew what they stood for——

Mr. THURSTON. Was not being sucked in and was a member, if I were the employing officer, I would not hire him.

Mr. BUSBEY. Mr. Thurston, I can go along with you to the point where any individual who may be the greatest patriot we have in the country might be sucked in as you termed it into one organization or even two organizations, but by the time he is in four or five of them, he knows what he is doing. They do not get sucked into all of those organizations without knowing what they are doing.

Mr. SCHWABE. The more likely he knows it.

Mr. THURSTON. I would personally assume that a man can be fooled once or twice but it is difficult to fool him half a dozen times.

JACOB B. CHASSAN, ANALYTICAL STATISTICIAN

Mr. BUSBEY. Do you have in your employ at the United States Public Health Service a man by the name of Jacob B. Chassan?

Mr. SIEPERT. I am not familiar with the name, Mr. Busbey.

Mr. BUSBEY. Would you find that out and supply it for the record—and who recommended him and his references?

I am trying to speed this up, Mr. Chairman, to bring this to a conclusion in just a minute.

(The requested information follows:)

Jacob B. Chassan has not been an employee of the National Institutes of Health. He was employed by the Public Health Service from May 16, 1949, to December 11, 1950, as an analytical statistician, GS–12, in the Division of Tuberculosis, Bureau of State Services. He came by transfer from the War Department and was separated last December as a transfer to the Veterans' Administration. The official personnel file, which contains the information concerning his application and his references, has been transferred to the Veterans' Administration.

INFORMATION ON THE EMPLOYMENT OF ELEANOR BELSER

Mr. BUSBEY. Do you have information on just one more for the record, briefly. Do you have the Form 57 of Eleanor Belser?

Mr. STAHL. I have it, sir.

Mr. BUSBEY. Will you look at the form, and because these have been changed from time to time, I am going to ask you to read the question in regard to their being a member of Communist organizations or any organization which advocates the overthrow of the Government and read the question as it is on her application and her answer to it, please?

Mr. STAHL. Yes, sir. Question 26 reads: "Do you advocate or have you ever advocated, or are you now or have you ever been a member of any organization that advocates the overthrow of the Government of the United States by force or violence?" And the answer is, "No."

Mr. BUSBEY. What were the circumstances or occasions of Miss Belser's employment by your agency?

Mr. SIEPERT. Miss Belser was employed in the early stages of our reorganization in our Classification Section as a classification analyst. That is a particular type of experience that is quite difficult to procure anywhere in the Government today. My recollection is that we had about everybody in our shop out trying to find or suggest names of people who might be suitable. The name of Miss Belser came to our attention as a recommendation from Mr. Graze and I believe his name appears as one of the references on the Form 57.

Mr. STAHL. That is correct.

Mr. SIEPERT. In accordance with our standard procedure, we checked Miss Belser's qualifications and experience in the usual manner, checking back against each of her supervisors, and the chief personnel officer, then made the appointment.

Mr. BUSBEY. Will you read into the record her references, Mr. Stahl?

Mr. STAHL. Gerald Graze, assistant executive officer—she listed it as executive officer, National Institute of Health; Irving L. Rice, former administrator of the Sugar Rationing Administration, Department of Agriculture; Everett W. Reimer, formerly Director of Per-

sonnel, Office of Price Administration. That is on the most recent Form 57. Do you want to get the other ones?

Mr. BUSBEY. Yes, please.

Mr. STAHL. Quite an old one. I am not sure it will have references listed. Here are the references listed on this one, the date of this application was April 20, 1944, on a previous Government job. She has listed here: Al Wells, Chief of Classification, Petroleum Administration for War; Dan Glass—if I can interpret her handwriting correctly—Chief of Classification, OPA; Arthur Dale, Chief of Classification of SWPC—Smaller War Plants Corporation; Sol A. Emerson, assistant personnel officer of the Office of Coordinator of Inter-American Affairs; and Catherine Heath—it says here, Carl Norden Bomb Sight, Elmira, N. Y. I do not know whether that is the address of the agency or what. But it also has listed: "Employee Relations." I do not know whether she was concerned with employee relations. I presume she was working for the Norden Bomb Sight outfit.

Those are the only ones listed on this Form 57. That is the last Form 57 in the file.

Mr. BUSBEY. Several days ago, Mr. Stephens handed me a typewritten statement with some information regarding Miss Belser and on the third line following the words "present position" is the following: "Removed on October 13, 1949 from National Institutes of Health, Bethesda, Md." To me, the word removed indicates that Miss Belser was fired or discharged. Is it not a fact that Miss Belser was declared to be of questionable loyalty and fired?

Mr. STEPHENS. Yes, sir.

Mr. BUSBEY. Is it not a fact that the FBI conducted an investigation on Miss Belser? Mr. McLean, you probably would know that.

Mr. MCLEAN. The FBI conducts investigations on all persons on whom material appears justifying it. We are not permitted to tell on individuals whether investigation was made.

Mr. BUSBEY. Was Miss Belser removed by action of your agency or by action of the regional loyalty board of the Civil Service Commission?

Mr. MCLEAN. Of course, technically the agency always has to consummate the action. But the removal was, as I read the file—you have it, Glenn—as a result of instructions from the loyalty board.

Mr. STAHL. From the Loyalty Review Board by letter of October 11, 1949 signed by Seth Richardson.

It is requested that Mrs. Belser's name immediately be removed from the rolls and this letter constitutes authority for such action.

Mr. BUSBEY. Do your records reflect that Miss Belser and Gerald Graze were employed by the OPA at the same time?

Mr. STAHL. I would have to check that, sir.

Mr. BUSBEY. Check that and supply it for the record. We will not take up the time right now.

(The requested information is as follows:)

According to the official personnel records, Mr. Graze was an administrative officer in the Washington office of the Office of Price Administration from November 1942 to July 1943 when he entered the Navy. During this period, Miss Belser was a classification analyst in the Division of Central Administrative Services, Office of Emergency Management, an agency which provided personnel services to OPA.

From June 1946 to January 1947, Mr. Graze was executive officer of the Consumer Goods Price Division, OPA. Miss Belser, from April 1944 through June 1947, was in the Personnel Division of OPA as a classification officer. From February 17, 1947 to August 10, 1947, Mr. Graze was Director of the Currency Control Division for the sugar rationing program, which had been transferred to the Department of Agriculture. Miss Belser, according to the file, was classification officer for the Sugar Rationing Administration from June 1 to August 1, 1947.

Mr. BUSBEY. Did the recommendation of Mrs. Belser by Mr. Graze raise a doubt in your mind as to her complete loyalty?

Mr. SIEPERT. No, Mr. Busbey, because in point of time I do not believe there had been any question raised on Mr. Graze.

Mr. BUSBEY. When was Mrs. Belser employed again?

Mr. STAHL. Just a minute. March 29, 1948 by transfer from the Navy Department.

Mr. BUSBEY. And Mr. Graze was removed December 16, 1948, which indicates there must have been some question in someone's mind about the loyalty of Mr. Graze before the date he was removed.

That is all, Mr. Chairman.

Mr. FOGARTY. Are there any further questions?

For the benefit of the record, I may say that I think we should take this up in executive session. I do not know how far afield we are going; when the committee meets in executive session we will take this subject up.

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